DOCUMENT RESUME

ED 440 051 SP 039 045

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TITLE Teaching and California's Future. The Status of the Teaching Profession: Research Findings and Policy Recommendations.

INSTITUTION Center for the Future of Teaching and Learning, Santa Cruz, CA.

PUB DATE 1999-00-00

NOTE 180p.; Produced with the assistance of The California State University Institute for Education Reform; Policy Analysis for California Education; Recruiting New Teachers, Inc.; The University of California, Office of the President; and WestEd Research conducted by SRI International.

AVAILABLE FROM Center for the Future of Teaching and Learning, 133 Mission Street, Suite 220, Santa Cruz, CA 95060. Tel: 831-427-3628; Web site: http://www.cftl.org.

PUB TYPE Reports - Evaluative (142)

EDRS PRICE MF01/PC08 Plus Postage.

DESCRIPTORS Academic Achievement; *Academic Standards; Beginning Teacher Induction; Beginning Teachers; Educational Policy; *Educational Quality; Elementary Secondary Education; Excellence in Education; Faculty Development; Higher Education; Preservice Teacher Education; State Standards; Teacher Competencies; *Teacher Improvement; *Teacher Qualifications; Teacher Supply and Demand; Teachers; *Teaching Skills

IDENTIFIERS *California

ABSTRACT

This document summarizes findings from a 1998-99 study of teacher development that investigated California's challenge to provide high quality teachers for all students. California's set of standards to improve education for all requires that all students have qualified teachers. In order for California's move toward academic excellence to succeed, it must simultaneously increase the quality and quantity of the teacher workforce. To address this challenge, a coalition of stakeholders came together to search for solutions. This document summarizes findings from the study and presents recommendations of the state task force. It discusses the supply of and demand for qualified teachers; distribution of unqualified teachers; the system of preparing qualified teachers; support for beginning teachers; teacher professional development; and state and district support. Results find that California has been aggressively developing and implementing many new programs to address professional development needs, but it has not created a system that supports the kind of teacher learning and professional growth that translates into excellence. Most schools and districts provide inadequate supports and incentives to allow teachers to enhance their own learning. Too many teachers work in conditions that inhibit professionalism. An appendix presents data collection methods and analysis. (Contains approximately 85 references.) (SM)

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ED 440 051

Teaching and California's Future

The Status of the Teaching Profession: Research Findings and Policy Recommendations

The Center for the Future of Teaching and Learning

And
The California State University Institute for Education Reform
Policy Analysis for California Education
Recruiting New Teachers, Inc.
The University of California, Office of the President
WestEd

Research Conducted by SRI International

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Suggested citation:

Shields, Patrick M., Esch, Camille E., Humphrey, Daniel C., Young, Viki M., Gaston, Margaret, & Hunt, Harvey. (1999). *The Status of the Teaching Profession:Research Findings and Policy Recommendations. A Report to the Teaching and California's Future Task Force.* Santa Cruz, CA: The Center for the Future of Teaching and Learning

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EXECUTIVE SUMMARY

In the middle of the 1990s, Californians awoke to a disturbing fact: our schools were not succeeding in educating our children. Results from the 1994 National Assessment of Educational Progress showed what many had suspected: California students ranked at the bottom of the nation in reading achievement.[1] What had once been considered among the best educational systems in the nation had significantly eroded.

California's response has been a determined march to improve the state's schools. At the heart of this effort has been the development of standards for what students should know and be able to do. The state now has well-articulated student learning goals, by grade, in the core subject areas of mathematics, reading and language arts, science, and social studies/history. State policy-makers have sent a clear message to educators and parents alike: all children must achieve at higher levels.

The goal of high standards for all students is a deceptively radical one. On the surface, it is a rhetorical phrase with which most would have long agreed. Yet, if taken seriously, it represents a rejection of a basic tenet of American schooling: some students will achieve at high levels, most will succeed moderately, and others inevitably will be low achievers. The California standards, in contrast, call not for just the best and the brightest—or the most advantaged—to succeed; all students are expected to reach high levels of performance.

To support the implementation of the standards, California has taken a series of policy actions. The state assessment system—STAR—has been augmented to include items to assess students' progress relative to standards. Instructional materials will be updated with new appropriations. A new accountability system supports and, if necessary, will place sanctions on schools whose students do not perform up to standard. Beginning in the 2003-04 school year, all students will have to pass a new high school exit exam to graduate from high school. These actions come on top of a massive investment in class size reduction, which itself was aimed at improving student learning in the early grades.

Yet standards—and the curricular, assessment and accountability systems designed to support them—will have little impact if teachers are not prepared to enact powerful instructional strategies necessary for all students to reach the standards. The bottom line is that standards-based reform asks more not only of students but also of all the adults expected to support student learning. No adults are more important to student success than teachers. Study after study has demonstrated the strong relationship between teacher quality and student learning. It is

estimated that the difference between an effective and ineffective teacher can be a full grade level of achievement in a school year.[2]

Effective teachers are those with strong verbal and mathematics skills, deep content knowledge in the subject they teach, and strong teaching skills.[3] Measuring such characteristics is not always easy. In California, the state has established minimum requirements for a regular teaching credential that combine coursework, practical experience in classrooms, and passing scores on basic skills and subject matter assessments. Successful completion of these requirements represents the minimum acceptable indication of quality and effectiveness to teach in the state's classrooms. In fact, research in California has shown that students perform better in schools where most teachers have met these requirements; students perform worse when they are in schools with larger numbers of underqualified teachers.[4]

Attainment of high standards for all California students, then, requires that every student have a qualified teacher to help him or her reach the standards. And this—providing a competent and effective teacher for every student—is the greatest challenge California faces.

The challenge is daunting, for many reasons. Under the best of circumstances, training and supporting a professional workforce is orders of magnitude more difficult than drafting standards, choosing instructional materials, or creating additional test items. Yet the present conditions are far from optimal. The teacher workforce in California is huge, approximately 284,000. Continued growth in student enrollment and the attrition of teachers from the profession have increased the demand for teachers, but not enough qualified teachers are willing to take jobs in public schools, resulting in severe shortages of credentialed teachers in California's classrooms.

Of course, even those teachers holding full credentials are being asked to do more and to do it with an increasingly culturally and linguistically diverse student body. These teachers need intensive and ongoing support—opportunities to acquire new subject matter knowledge and to learn more effective pedagogy. Furthermore, veteran teachers must be supported in their efforts to usher novices into the profession and, in some cases, to provide professional development to their colleagues.

In short, if California's march toward academic excellence is to be successful, it must simultaneously increase the quantity *and* the quality of the teacher workforce. Failure to do so—to place high-quality, effective teachers in every classroom—will transform the ambitious standards-based movement into a meaningless game of politics, teacher frustration, and, worse, increased student failure.

Teaching and California's Future

To address this challenge, a coalition of stakeholders with interests in teacher recruitment, preparation, induction support, and professional development have come together to search for ways to ensure that all California schoolchildren have a qualified and effective teacher. Led by the Center for the Future of Teaching and Learning and cosponsors—the California State University Institute for Educational Reform; Policy Analysis for California Education (PACE); Recruiting New Teachers, Inc.; University of California Office of the President; and WestEd—these stakeholders are implementing an initiative focused on building teacher workforce capacity. *Teaching and California's Future* involves a twofold strategy: (1) convening a Task Force of key policy-makers, practitioners, institutions of higher education, and professional organizations to develop and implement a plan to improve teacher development policies and practices in California; and (2) undertaking a comprehensive study of the conditions of teacher development in the state to inform the work of the Task Force.

During the 1998-99 school year, SRI International conducted the statewide study of teacher development. The study involved a survey of a representative sample of K-12 California public school teachers and eight case studies of local teacher development systems throughout California. In addition, the SRI research team extensively reviewed secondary databases, analyzed new state policy initiatives, and interviewed key state policy-makers.[5]

This document summarizes the findings of the research carried out in support of *Teaching and California's Future* and includes the recommendations the Task Force developed in response to the research findings. At the request of the Task Force, the study focused on what is being done (1) to ensure a qualified teacher in every California classroom and (2) to build and maintain the strengths of the current teacher workforce.

Ensuring a Qualified Teacher for Every California Schoolchild

Does California produce, attract, and retain a sufficient number of teachers to ensure that every California schoolchild is in a classroom with a qualified teacher—and will it be able to do so in the future? Which students are most likely to be taught by an underqualified teacher? What is being done in terms of preparing teachers to ensure a qualified and effective teacher for every California schoolchild?

The answers to these questions are quite sobering. No, **California currently does not provide qualified teachers for all students**. More than 1 in every 10 classrooms in the state are staffed by teachers who have not met the state's minimum requirements. California policy-makers, including the Governor, are aware of this situation and have initiated a number of new

policies to address the problem since the beginning of 1998—such as the expansion of the teacher preparation programs in the California State University system. Still, we project that at best it will be many years before current policies will be sufficient to bridge the gap between the demand for teachers and the supply of qualified candidates willing to take jobs in the state's schools.

In the meantime, **those students in greatest need of effective teachers are the most likely to be in classrooms with underqualified teachers.**[6] In fact, the distribution of qualified teachers is quite uneven across the state. Students in poor, inner-city schools are much more likely than their more advantaged suburban counterparts to have underqualified teachers. Students who score in the bottom quartile of reading achievement in third grade are five times as likely as students scoring in the top quartile to have an underqualified teacher. These are the students who, if they do not learn to read well soon, will be unable to perform well in any subject area. And, of course, it is just these students whom, a few years hence, the state will most likely deny graduation from high school because they cannot meet the standards.

In response to the shortage of teachers, efforts are under way to increase the capacity of the teacher preparation system to turn out more teaching candidates and to create more flexible and streamlined routes into the profession. To the extent that policy efforts promise to increase the number of individuals preparing for the profession, they also raise serious questions about the capacity of alternative providers to support teacher candidates and about the quality of these alternative routes. **Of particular concern are the disincentives in areas of high demand for teacher candidates to complete—or even begin—their preparation before entering the classroom as a full-time teacher.**

Building and Maintaining the Strengths of the Current Teacher Workforce

As California struggles to attract and prepare a sufficient number of candidates for teaching—and to place them where they are in greatest demand—it faces the challenge of supporting those teachers already practicing in classrooms. Currently, there are approximately 284,000 practicing teachers in the state's public schools—all of whom is being asked to do more with their students. If these teachers are expected to help all of California's students to reach the state's standards for learning, the teachers themselves will require high-quality learning opportunities.

In light of the importance of equipping teachers for their expanded role in helping students reach standards, we asked set of questions related to teacher learning. First, what kinds of learning opportunities are available to and taken advantage of by California's teachers? Second,

what is the quality of these opportunities—in particular, to what degree does professional development improve teachers' ability to do their jobs? Third, what are the state and local districts doing to support high-quality professional development?

The answers to these questions show that California has not progressed far enough in ensuring that all teachers receive high-quality professional development. There certainly are many professional development initiatives and programs, and, in fact, teachers do report participating in about 3 work-weeks of professional development per year. **Yet much of professional development continues to be disconnected workshops and other "traditional" activities. Intensive, ongoing, and content-based learning opportunities are uncommon for California teachers.**

Although examples of high-quality professional development exist, in general, teachers do not believe that the professional development activities they participate in have a substantial impact on their teaching. Only half of all teachers respond that they received new information from professional development—a relatively low standard of impact. One in five teachers think that the professional development they participated in was a waste of their time. Still, the small percentage of teachers who have opportunities for high-quality professional development, who collaborate around concrete activities focused on instruction and student work, report that their professional development experiences have a greater impact on their professional growth and instructional skills than do other teachers.

Our review of state policy demonstrates the commitment of the state to the importance of professional development. The many state professional development initiatives provide needed resources to districts and schools to address important goals, like increasing reading achievement. **At the same time, some state policies restrict local efforts, increase the burden on local educators as they seek to follow state guidelines, and, in combination with myriad federal and privately sponsored initiatives, make it difficult for districts, schools, or teachers to formulate a coherent professional development strategy.**

Thus, although much is being done to support teachers' professional development, too little of it is sufficiently focused and coherent to help teachers bring California's students up to the state standards.

Task Force Recommendations to Strengthen the Teaching Profession in California

In response to these findings, the Task Force has made the following recommendations:

Ensure that every child has a fully qualified, effective teacher.

- Implement a comprehensive program of preparing and placing qualified teachers in inadequately staffed schools through specifically focused competitive grants available to publicly supported colleges and universities which are located in areas with high percentages of inadequately staffed schools.
- Provide 100% forgivable state loans of at least $20,000, plus tuition fees and books to students who enroll in and complete a teacher preparation program and immediately go on to teach in a hard-to-staff school for a minimum of 4 years, by expanding APLE loans and Cal T grants.
- Expand SB 1X to provide annual discretionary grants of $350 per student for up to three years to enable inadequately staffed schools to attract and retain fully qualified classroom teachers, develop the skills and knowledge of the school's resident staff, and take steps to create a positive learning environment for students and teachers.
- Expand the provisions of existing law to require the Commission on Teacher Credentialing to notify annually all local education agencies when they employ more than 150% of the statewide average of under-qualified teachers, encourage the identified districts to review and modify their recruitment, hiring, and placement practices.
- Encourage local policy makers and bargaining units to focus Peer Assistance and Review programs (PAR) on inadequately staffed school sites. Special attention in these efforts should be given to the identification, selection, and preparation of accomplished teachers responsible for ushering novice teachers into the profession.
- Provide training for accomplished teacher leaders called upon to provide professional development or support for novice teachers, and ensure that their classrooms are staffed by fully qualified teachers in their absence.
- Establish regional cadres of accomplished veteran teachers and recognized experts, with additional incentives for drawing from the pool of retired teachers, to provide professional development and support for novice teachers at inadequately staffed schools. Classrooms of teachers providing professional development and/or support for novice teachers must be staffed by fully qualified teachers.

Eliminate the hiring of unqualified teachers.

- Phase out the approval of waivers and emergency permits over the next 5 years, allowing waiver of credential requirements by the Commission on Teacher Credentialing only in exceptional cases where specialized individual skill and talent or eminence is involved.

- Expand Cal T grants in size and number, with special emphasis on shortage fields (i.e., math, physical science, computer science, special education).

Improve the ability of the teaching profession to attract and keep fully qualified teachers.

- Revise the current beginning teacher salary incentive of $32,000 to establish a target minimum of $40,000 for fully qualified new teacher hires in order to make teaching more competitive with other professional opportunities in attracting talented and qualified individuals.
- Continue and expand through CalTeach and other state and local programs efforts to recruit teacher candidates whose background and experiences mirror those of the state's diverse student population.
- Provide incentives for developing and maintaining a professional working environment that address facilities use, scheduling, safety, materials, supplies, and other conditions under which teachers are attracted to and stay in the profession.

Strengthen accountability for all teacher education programs.

- The Commission on Teacher Credentialing should ensure, as a part of monitoring or accreditation processes being developed, that teacher preparation programs, including district or university internships, prepare teachers in a manner consistent with the California Academic Standards and the California Standards for the Teaching Profession.
- Initiate an effort to stop the flow of prospective teachers out of the public education system before classroom placement through a statewide system to monitor the progress of preservice candidates through professional preparation and into the job market. Such a system must include a standardized reporting format for all accredited teacher preparation programs, and an annual summary report published by the Commission on Teacher Credentialing.

Reduce unnecessary barriers to teaching.

- Continue to pursue aggressively full reciprocity with other high-standards states and recruit aggressively from states with surpluses of qualified teachers.
- Initiate an independent effort to review local hiring and placement practices and to develop model policies and procedures designed to reduce the delays in hiring new teachers and identify steps local districts and bargaining units can take to ensure that students with the greatest educational needs are placed with teachers best qualified to teach them.

Encourage and support teachers to reach high levels of subject matter expertise and instructional skill.

- Commission, on behalf of the Legislature, an independent analysis of existing statutes, regulations, policies, procedures, and guidelines with the intent of eliminating provisions that deflect teachers' professional development time to matters other than the enhancement of subject matter expertise and instructional skills, and that don't reflect the elements of high quality professional development.
- Focus professional development on enabling students to meet the state standards by calling for all appropriate public agencies, including the legislature, State Board of Education, State Department of Education, and the California Commission on Teacher Credentialing, to take action to ensure that state-sponsored and locally sponsored professional development opportunities are consistent with the elements of high-quality professional development.
- Ensure that all novice teachers, including interns and those on emergency permits and waivers, get the support and guidance they need to enable their students to reach the state standards for student learning.
- Make available to districts incentives of up to $250 per student (75% new funding with a local match of 25% from existing sources) to restructure the teaching day and year to embed time for teachers to participate in high quality professional development that addresses student standards.
- Create incentives for teacher preparation institutions to offer experienced teachers masters degree programs consistent with standards set forward by the National Board for Professional Teaching Standards that culminate in the award of both a master of arts degree and successful completion of the National Board certification assessments.
- By 2005 the Legislature should establish an overall statewide goal in statute of at least one teacher certified by the National Board for Professional Teaching Standards for every school in the state.
- Support for National Board certification candidates should be included annually in the budget with funds authorized for 1) continuing the incentives established in AB 858, 2) subsidizing candidate application fees, and 3) developing candidate support programs. Priority in allocation of these funds should be given to candidates from and programs providing service to inadequately staffed schools.

Summary

In the considered opinion of the Task Force, California policy-makers and educators should be congratulated for the bold steps taken in the last few years to bolster the state's public school system. The research conducted for *Teaching and California's Future* documents the promise of the many new state initiatives, the statewide commitment to higher standards for all students, and

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CHAPTER 1. INTRODUCTION

Background: High Standards for All

In the middle of the 1990s, Californians awoke to a disturbing fact: our schools were not succeeding in educating our children. Results from the 1994 National Assessment of Educational Progress showed what many had suspected: California students ranked at the bottom of the nation in reading achievement.[1] What had once been considered among the best educational systems in the nation had significantly eroded.

The response to these results has been a determined march to improve the state's schools. At the heart of this effort has been the development of standards for what students should know and be able to do. The state now has well-articulated student learning goals, by grade, in the core subject areas of mathematics, reading and language arts, science, and social studies/history. State policy-makers have sent a clear message to educators and parents alike: all children must achieve at higher levels.

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To support the implementation of the standards, California has taken a series of policy actions. The state assessment system—STAR—has been augmented to include items to assess students' progress relative to standards. Instructional materials will be updated with new appropriations. A new accountability system supports and, if necessary, will place sanctions on schools whose students do not perform up to standard. Beginning in the 2003-04 school year, all students will have to pass a new high school exit exam to graduate from high school. These actions come on top of a massive investment in class size reduction, which itself was aimed at improving student learning in the early grades.

Yet standards—and the curricular, assessment and accountability systems designed to support them—will have little impact if teachers are not prepared to enact powerful instructional strategies necessary for all students to reach the standards. In fact, when California students performed poorly on the first administration of standards-based items on the state assessment, controversy erupted over the question of whether students had been adequately prepared. State

Superintendent of Public Instruction Delaine Eastin captured the problem succinctly: "They [students] were asked to answer questions on materials they had not yet been taught or had the chance to learn."[2]

The Key to Student Success: High-Quality Teachers

The bottom line is that standards-based reform asks more not only of students but also of all the adults expected to support student learning. No adults are more important to student success than teachers. Study after study has demonstrated the strong relationship between teacher quality and student learning. It is estimated that the difference between an effective and an ineffective teacher can be a full grade level of achievement in a school year.[3] A study in Tennessee, for example, showed that whereas low-achieving students with the least effective teachers gained about 14 percentile points in a year, similarly low-achieving students gained 53 percentile points in the most effective teachers' classrooms.[4]

Effective teachers are those with strong verbal and mathematics skills, deep content knowledge in the subject they teach, and strong teaching skills.[5] Measuring such characteristics is not always easy. In California, the state has established minimum requirements for a regular teaching credential that combine coursework, practical experience in classrooms, and passing scores on basic skills and subject matter assessments. Successful completion of these requirements represents the minimum acceptable indication of quality and effectiveness to teach in the state's classrooms. In fact, research in California has shown that students perform better in schools where most teachers have met these requirements; students perform worse when they are in schools with larger numbers of underqualified teachers.[6]

Attainment of high standards for all California students, then, requires that every student have a qualified teacher to help him or her achieve to the standards. And this—providing a competent and effective teacher for every student—is the greatest challenge California faces.

The challenge is daunting, for many reasons. Under the best of circumstances, training and supporting a professional workforce is orders of magnitude more difficult than drafting standards, choosing instructional materials, or creating additional test items. Yet the present conditions are far from optimal. The teacher workforce in California is huge, approximately 284,000. Continued growth in student enrollment and the attrition of teachers from the profession have increased the demand for teachers, but not enough qualified teachers are willing to take jobs in public schools, resulting in severe shortages of credentialed teachers. In 1998-99, more than 10% of California's classrooms are headed by adults who have not met the state's minimum requirements. And those students who need the greatest assistance, those whose

current performance is farthest below the state standards, are the most likely to be in classrooms with underqualified teachers.

Of course, even those teachers holding full credentials are being asked to do more and to do it with an increasingly culturally and linguistically diverse student body. These teachers need intensive and ongoing support—opportunities to acquire new subject matter knowledge and to learn more effective pedagogy. Again, research points to the efficacy of intensive content-based professional development for teachers in improving teacher practice and student achievement.[7] Yet the system of professional development in the state remains largely uncoordinated, placing the burden on individual teachers to create coherent learning opportunities to increase their capacity to bring students up to standards.

In short, if California's march toward academic excellence is to be successful, it must simultaneously increase the quantity *and* the quality of the teacher workforce. Failure to do so—to place high-quality, effective teachers in every classroom—will transform the ambitious standards-based movement into a meaningless game of politics, teacher frustration, and, worse, increased student failure.

Teaching and California's Future

To address this challenge, a coalition of stakeholders with interests in teacher recruitment, preparation, induction support, and professional development have come together to search for ways to ensure that all California schoolchildren have a qualified and effective teacher. Led by the Center for the Future of Teaching and Learning and cosponsors—the California State University Institute for Educational Reform; Policy Analysis for California Education (PACE); Recruiting New Teachers, Inc.; University of California Office of the President; and WestEd—these stakeholders are implementing an initiative focused on building teacher workforce capacity. *Teaching and California's Future* involves a twofold strategy: (1) convening a Task Force of key policy-makers, practitioners, institutions of higher education, and professional organizations to develop and implement a plan to improve teacher development policies and practices in California; and (2) undertaking a comprehensive study of the conditions of teacher development in the state to inform the work of the Task Force.

The Task Force on Teaching and California's Future comprises practitioners and leaders from the key organizations responsible for oversight of the teacher development system. The cosponsors have identified and brought to the table representatives from a broad cross-section of the critical policy and educational leadership organizations in the state, as well as leading

practitioners, including accomplished classroom teachers. The charge to each Task Force member includes:

- Providing counsel on the design and conduct of a study of teacher development in California.
- Encouraging the cooperation of those inside his/her own organization throughout the study period.
- Deliberating on the findings from the research and drawing from the data recommendations to strengthen teacher development.
- Mobilizing his/her agency or organization to carry out the recommendations of the Task Force.

Progress to Date

Since January 1998, the Task Force has convened six times. At its second meeting, in June 1998, the Task Force was presented with *An Inventory of the Status of Teacher Development in California*, prepared by SRI International.[8] The *Inventory* reviewed and assembled secondary data on key issues facing the teacher development system. Based on previous studies, analyses of available databases, review of legislation and program documents, and interviews with key actors throughout the state, this report provided an objective picture of the status of the teaching profession in California.

The Task Force's review of the *Inventory* resulted in a decision to move forward with the design of a study to collect data on a series of issues not well addressed through existing data. The design of that original data collection was presented to the Task Force in fall 1998. During the remainder of the 1998-99 school year, the SRI research team undertook the study, the results of which are the source of the findings in this document. This research included a statewide teacher survey and eight case studies of local teacher development systems throughout California. In addition, the SRI research team continued to review secondary databases to update the key findings in the original *Inventory*.

The statewide teacher survey targeted a representative sample of K-12 California public school teachers. Seventy-seven percent of the surveyed teachers responded to the 60-item survey. The survey instrument asked teachers for their perspectives in the following key areas, concentrating particularly on those topics for which we found significant gaps in existing statewide data during our work on the original *Inventory*:

- Teacher preparation
- Job search and recruitment

- Induction for new teachers
- Professional development and workplace support
- Compensation and evaluation of teachers.

Details on survey data collection and analysis can be found in Appendix A.

To complement the breadth of statewide data gathered through the inventory and the teacher survey, we conducted case studies of eight local systems of teacher development—in El Centro, Elk Grove, Eureka, Los Angeles, San Diego, San Francisco, Santa Monica, and Selma. Case study sites were selected to achieve a mix of regional settings and represent urban, suburban, and rural districts. In addition, the case study sample was selected to include both districts with high access to teacher professional development opportunities and those with more typical levels of access.

Each case study focused on one district and included visits to the district office, visits to four schools within the district, and in-depth interviews with four teachers at each school. In addition, we conducted larger focus groups with additional teachers, interviews with school and district administrators, and interviews with other key players in the district's professional development system. The case studies examined teachers' career decisions and learning opportunities, the effectiveness of these opportunities, and the extent to which the current system of teacher development is integrated and coherent. Additional detail on the case studies is also presented in Appendix A.

Looking Ahead: Principles for Improving Teacher Development in California

A draft of this document was presented to the Task Force in September 1999 to provide its members with the most up-to-date information on the status of the system of teacher development in California and, in doing so, to pinpoint the key areas that require the attention of policy-makers. As a result, the Task Force leadership developed a set of key recommendations, which are detailed later in this document. In brief, these are:

1. Ensure that every child has a fully qualified, effective teacher.
2. Eliminate the hiring of unqualified teachers.
3. Improve the ability of the teaching profession to attract and keep fully qualified teachers.
4. Strengthen accountability for all teacher education programs.
5. Reduce unnecessary barriers to teaching.
6. Encourage and support teachers to reach high levels of subject matter expertise and instructional skill.

Products of *Teaching and California's Future*

This document includes the main research findings of *Teaching and California's Future* and the detailed recommendations of the Task Force. The document is organized into two main parts. Part I addresses the issue of ensuring a qualified and competent teacher for every California schoolchild. It includes chapters on the supply of and demand for teachers, the distribution of qualified and underqualified teachers in the state, and the system for preparing teachers for California's classrooms. Part II addresses the issue of building and maintaining the strengths of the current teacher workforce. It contains chapters on induction, professional development, and state and district supports for professional development. In both parts, each chapter is preceded by a short synopsis of the key findings presented therein. Each part ends with key recommendations from the Task Force.

In addition to this document, the Center for the Future of Teaching and Learning commissioned or adopted a series of papers to address issues raised in this study and to inform the work of the Task Force. These papers are available from the Center:

- *The Essential Profession*, by David Haselkorn, Louis Harris, and Elizabeth Fideler[9]
- *Professional Development for Teachers: Setting the Stage for Learning from Teaching*, by Linda Darling-Hammond[10]
- *Preparation for Teaching California's Culturally and Linguistically Diverse Students*, by Patricia Gandara and Julie Maxwell-Jolly[11]
- *Teachers and Standards*, by Phil Daro[12]
- *Good Teaching Matters...A Lot*, by Kati Haycock[13]
- *A White Paper on Teacher Induction in California*, by SRI International (cosponsored by the New Teacher Center)[14]

Endnotes

[1] Results refer to fourth-grade reading achievement as reported in National Assessment of Educational Progress. 1994. *The nation's report card.* Washington, DC: National Center for Education Statistics.

[2] Eastin, Delaine. (1999, June). Draft letter from State Superintendent of Instruction to parents.

[3] Hanushek, Eric A. (1992). The trade-off between child quantity and quality, *Journal of Political Economy* (cited in Haycock, 1998).

[4] Sanders, William J., & Rivers, June C. (1996). *Cumulative and residual effects of teachers on future students' academic achievement.* Knoxville: University of Tennessee Value-Added Research and Assessment Center.

[5] Haycock, K. (1998, Summer). Good teaching matters...A lot. *Thinking K-16, 3*(2), The Education Trust, Washington, DC.

[6] Fetler, M. (1999, March). High school staff characteristics and mathematics test results. *Education Policy Analysis Archives, 7*(9).

[7] See, for example, Shields, P. M., David, J. L., Humphrey, D. C., & Young, V. M. (1999). *Evaluation of the Pew Network For Standards-Based Reform: Third year report.* Menlo Park, CA: SRI International; and Cohen, D., & Hill, H. (1998, January). *CPRE policy briefs: State policy and classroom performance: Mathematics reform in California.* Philadelphia, PA: Consortium for Policy Research in Education.

[8] Shields, P. M., Marsh, J. M., & Powell, J. (1998). *An inventory of the status of teacher development in California.* Menlo Park, CA: SRI International.

[9] Haselkorn, D., Harris, L., & Fideler, E. (1998). *The essential profession.* Belmont, MA: Recruiting New Teachers, Inc.

[10] Darling-Hammond, L. (1999). *Professional development for teachers: Setting the stage for learning from teaching.* Santa Cruz, CA: The Center for the Future of Teaching and Learning.

[11] Gandara, P., & Maxwell-Jolly, J. (1999). *Preparation for teaching California's culturally and linguistically diverse students.* Santa Cruz, CA: The Center for the Future of Teaching and Learning.

[12] Daro, P. (1999). *Teachers and standards.* Santa Cruz, CA: The Center for the Future of Teaching and Learning.

[13] Haycock, K. (1998, Summer).

[14] SRI International. (Forthcoming). *A white paper on teacher induction in California.* Santa Cruz, CA: The Center for the Future of Teaching and Learning and the New Teacher Center.

PART I. ENSURING A QUALIFIED TEACHER FOR EVERY CALIFORNIA SCHOOLCHILD

The hope of having all students reach ambitious academic standards turns on the state's capacity to ensure a qualified and competent teacher in every classroom in the state. With a teacher workforce of approximately 284,000 and the need to hire at least 26,000 new teachers each year, filling every classroom with a qualified teacher is and will remain a challenge. Yet, if the state does not do so, the call for higher standards rings hollow. Without the political courage and will to provide every student a fully qualified and effective teacher, the state has no right to hold either schools or students accountable for high levels of achievement.

In this first part of the report, we ask three basic questions. First, does California produce, attract, and retain a sufficient number of teachers to ensure that every California schoolchild is in a classroom with a qualified teacher—and will it be able to do so in the future? Second, which students are most likely to be taught by an underqualified teacher, and what is the impact on a child's education? Third, what is being done in terms of preparing teachers to ensure a qualified and effective teacher for every California schoolchild?

The answers to these questions, which we address in detail, are quite sobering. No, **California currently does not provide qualified teachers for all students**. More than 1 in every 10 classrooms in the state are staffed by teachers who have not met the state's minimum requirements. California policy-makers, including the Governor, are aware of this situation and have initiated a number of new policies to address the problem since the beginning of 1998—such as the expansion of the teacher preparation programs in the California State University system. Still, we project that at best it will be many years before current policies will be sufficient to bridge the gap between the demand for teachers and the supply of qualified candidates willing to take jobs in the state's schools.

In the meantime, **those students in greatest need of effective teachers are the most likely to be in classrooms with underqualified teachers**. In fact, the distribution of qualified teachers is quite uneven across the state. Students in poor, inner-city schools are much more likely than their more advantaged suburban counterparts to have underqualified teachers. Students who score in the bottom quartile of reading achievement in third grade are five times as likely as students scoring in the top quartile to have an underqualified teacher. These are the students who, if they do not learn to read well soon, will be unable to perform well in any subject area. And, of course, it is just these students whom, a few years hence, the state will most likely refuse to graduate from high school because they cannot meet the standards.

In response to the shortage of teachers, efforts are under way to increase the capacity of the teacher preparation system to turn out more teaching candidates and to create more flexible and streamlined routes into the profession. To the extent that policy efforts promise to increase the number of individuals preparing for the profession, they also raise serious questions about the capacity of alternative providers to support teacher candidates and about the quality of these alternative routes. **Of particular concern are the disincentives in areas of high demand for teacher candidates to complete—or even begin—their preparation before entering the classroom as a full-time teacher.**

In essence, California is embarked on a path where there are not enough qualified teachers in our classrooms and where the neediest students are allocated the fewest professional resources. Such an indictment of the current educational system in the state must be based on sound data and analysis. We devote the remainder of Part I of this report to the presentation of these data and analyses. In Chapter 2, we explore the overall statewide supply of and demand for teachers. In Chapter 3, we examine the distribution of shortages across the state and underscore the strong relationship between the needs of students and the percentage of underqualified teachers in that school. In Chapter 4, we examine the capacity of the system of teacher preparation to produce a sufficient number of qualified teacher candidates, describe current trends toward alternative preparation programs, and raise some issues about the potential effectiveness of such programs. We conclude Part I with the relevant Task Force recommendations.

CHAPTER 2. THE SUPPLY OF AND DEMAND FOR QUALIFIED TEACHERS FOR CALIFORNIA'S CLASSROOMS

DEMAND

How many teachers will California schools have to hire to serve the state's growing and diverse student population?

- Through the middle of the next decade, California can expect a sustained demand for a large number of teachers—increasing from 28,000 new hires in 1999 to 36,000 in 2007.
- From 1999-2000 through 2007-08, we estimate that approximately 287,000 *new* teachers will need to be hired to adequately serve California's growing student population (for a total teacher workforce of 306,000 in 2007-08).
- The central factors fueling the increased demand for teachers are student enrollment growth, class size reduction, teacher attrition, and baby-boomer retirement.

SUPPLY

How many teachers will the state produce to meet the demand for new teachers?

- California issued approximately 17,000 new credentials in 1997-98.
- However, the number of new credentials does not equal the number of new teachers entering the workforce. It is estimated that 50% to 70% of new credential holders take jobs the following year. This fact is somewhat offset by credentialed teachers reentering the labor pool.
- Taking into account recent key policies, estimates of teacher supply in the year 2007-08 range from a high of approximately 315,000 to a low of approximately 268,000.

SUPPLY AND DEMAND

Will there be enough new teachers to meet the demand in California schools?

- Currently, there are not enough qualified teachers in California classrooms. In 1998-99, more than 28,500 emergency permits were issued to underqualified teachers, a sharp increase from the 15,400 emergency permits issued in 1995-96, before class size reduction.
- California will need 306,000 qualified teachers to staff its classrooms in school year 2007-08.
- We project that the supply of credentialed teachers willing to take these jobs is likely to fall short of this demand, absent aggressive policy intervention.
- Even under the most optimistic scenarios, we do not project the gap between the demand for teachers and the supply of credentialed teachers willing to take jobs to close for 7 years.

Does California produce, attract, and retain a sufficient number of teachers to ensure that every California schoolchild is in a classroom with a qualified teacher? The answer is no. Over the past decade, the state has experienced a severe shortage of fully credentialed teachers willing to accept jobs in the public school system. As we outline in detail in this chapter, as student enrollment has grown, class size reduction has been put in place, and teachers have left the system, increasingly larger numbers of California classrooms have been staffed by underqualified teachers—teachers who have not met the state's minimum requirements for obtaining a full credential.

Is there any hope that the situation will improve in the future? Certainly, state policy-makers have taken some steps to address the problem, such as the expansion of the Beginning Teacher Support and Assessment program and the expansion of the capacity of the California State University system to prepare teachers. The degree to which these and other policies can close the gap can only be estimated. Such estimates have to be combined with projections of the future decisions of hundreds of thousands of current teachers—whether they will stay in the profession—and potential future teachers—those who currently hold credentials but have chosen to remain out of the teacher workforce, those who are in teacher preparation programs, and those who potentially could enter preparation programs in the future. Past trends—of attrition, retirement, and job taking—can serve as guides to these projections but can yield only estimates.

Consequently, we present our projections as a range of possible outcomes. We conclude that even under the most optimistic scenario—one with historically low attrition, high job-taking rates, and effective implementation of new state policies—the shortage of qualified teachers in California classrooms is likely to continue for at least another 7 years. Under less optimistic scenarios, the gap will continue into the foreseeable future, absent aggressive policy intervention.

In the remainder of this chapter, we build these findings in detail. We begin with an examination of the historical demand for teachers in the state and project that demand into the future, accounting for a series of factors we identify as fueling demand. Next, we examine the historical supply of qualified teachers—that is, fully credentialed teachers willing to take available jobs—and project supply figures into the future as well. In doing so, we consider the impact of recent policy initiatives designed to increase the number of qualified teachers.

The Demand for Teachers in California's Classrooms

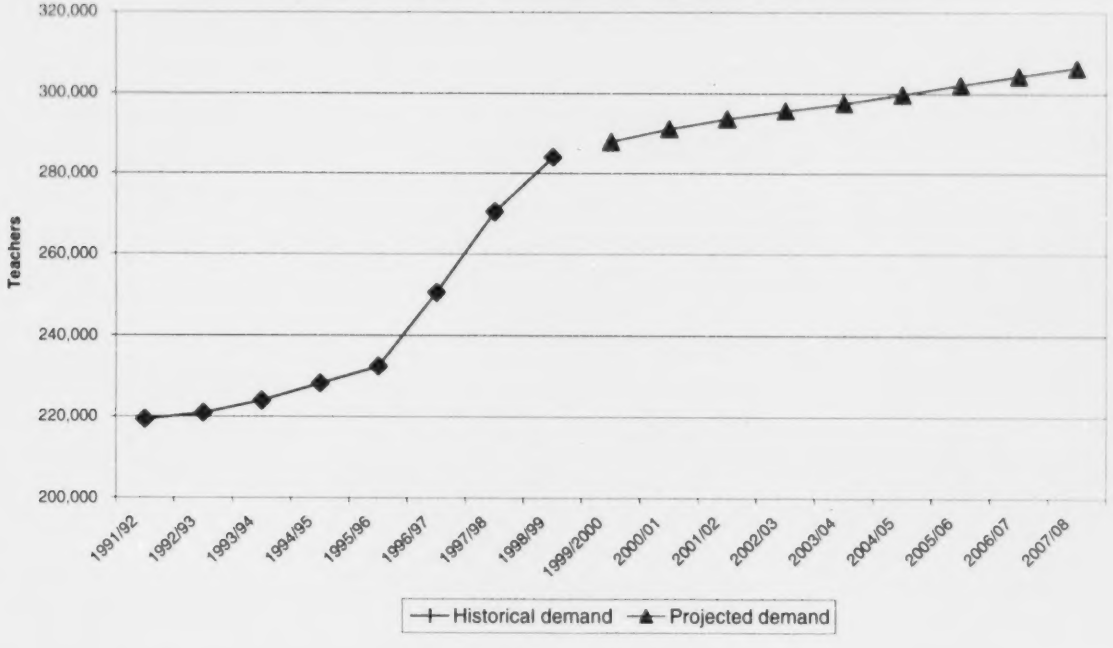
The demand for teachers in California has grown dramatically during the 1990s and is expected to continue to increase. In the past decade, the size of the teacher workforce has increased nearly 40%, starting with approximately 197,000 teachers in 1988-89.[1] In 1998-99,

there were approximately 284,000 teachers in K-12 classrooms throughout California.[2] This increasing demand for teachers stems from a combination of increasing enrollment, natural attrition, increasing retirement from the profession, and the policy decision to reduce class sizes in the early elementary grades. Figure 2-1 illustrates both the historical demand for teachers in California and our projection of the future demand.

The large increases in the demand for teachers during the 1996-97 and 1997-98 school years, as illustrated in Figure 2-1, are largely reflective of the 1996-97 class size reduction (CSR) legislation. The projected increase in demand reflects the anticipated retirement of the baby boomers, should the average retirement age remain unchanged.

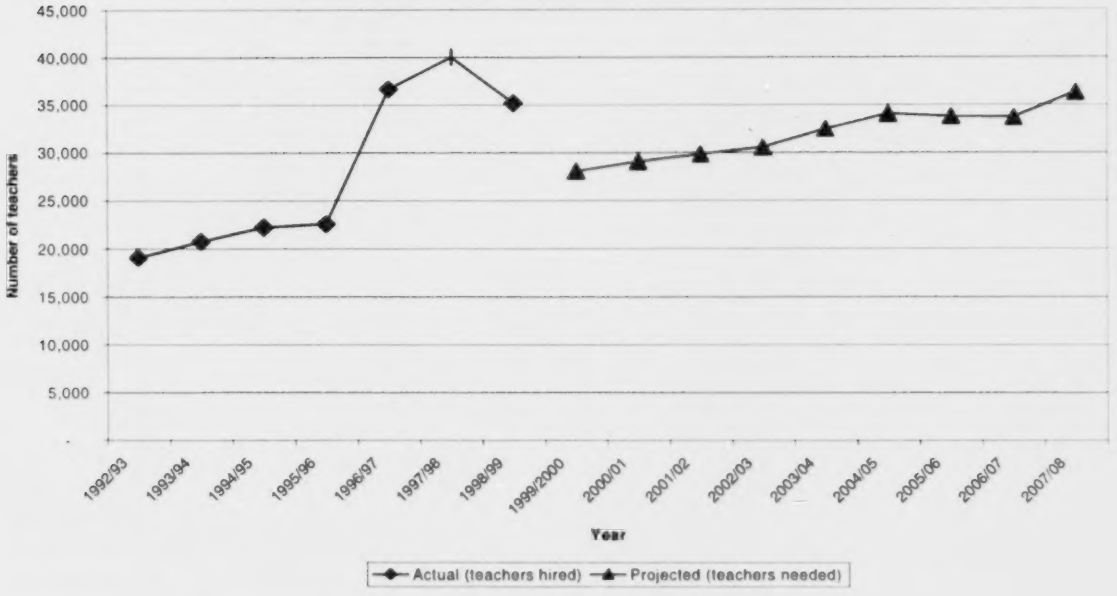
This rising demand means that California can expect to hire a large number of teachers—growing from 28,000 in 1999-2000 to 36,000 in 2007-08, and averaging about 32,000 each year (see Figure 2-2). From 1999 through 2008, we estimate that about 287,000 new teachers must be hired to fill California's classrooms. These figures do not include the credentialed teachers needed to replace emergency permit holders currently in California classrooms.

Figure 2-1
Historical and Projected Demand for Teachers in California



Sources: Fetler (1997)[3]; SRI analysis.

Figure 2-2
Actual and Projected Teacher Hires, 1992-2007



Sources: CDE (August 1997); SRI analysis.[4]

Projecting the demand for new teachers requires assumptions about enrollment trends, the stability of teacher-student ratios, and attrition and retirement rates. Thus, these projections represent estimates and should be interpreted as such. It is also important to keep in mind that other contextual factors could change and subsequently affect these projections. For example, if class size reduction were expanded to cover more grade levels, we would expect a sharp increase in the demand for teachers. Conversely, increases in teacher salaries or other policy initiatives might reduce attrition and lower the growing demand. Below, we explore three key factors that are fueling the demand for teachers.

Factors Fueling Demand: Student Enrollment Growth

Increasing numbers of school-age children account for some of the growing demand for teachers. Student enrollment is growing nationally, in part because of "the baby boom echo," as children of baby boomers continue to fill classrooms.[5] In California, which has added approximately 4 million new residents since 1990, student enrollment is also affected by overall population growth.[6] From 1988-89 to 1997-98, student enrollment in California grew by approximately 1.1 million, or 25%.[7] Looking forward, enrollment in California is projected to grow from 5.8 million K-12 students in 1998-99 to 6.2 million students by 2007-08.[8] Assuming

the current pupil-teacher ratio, California would need to add about 19,400 new teachers from 1998-99 to 2007-08 to keep pace with student enrollment growth alone.

Factors Fueling Demand: Attrition and Retirement

Much of the predicted increase in future demand is due to the expected departure of many teachers from California's workforce through retirement and attrition. The attrition of practicing teachers—and their retirement, to a lesser extent—are individual economic decisions, based on the salary for teaching vis-à-vis salaries in competing industries, working conditions, teaching assignments available, and location of the job. Because available data on retirement and attrition is limited and because we can only estimate how individuals will choose to act in the future, the demand due to these factors can only be estimated.

Overall, most estimates of annual attrition (the loss of teachers from the profession for reasons other than retirement) cluster around 6%.[9] This estimate includes the high number of teachers who leave the profession early in their careers.[10] Estimates of annual retirement cluster around 2%—ranging between 1.3% and 2.3%.[11] These estimates are generally based on data from the California State Teachers' Retirement System (STRS). We estimate that 1.9% of active STRS members retired in fiscal year 1997-98.[12]

However, many expect the retirement rate to increase among teachers (as it probably will in all professions) in the coming years because of the age of the current workforce. In 1997-98, half of all active STRS members were more than 45 years old, and one out of seven were 55 or older.[13] Although current data sources do not allow a precise analysis of the probable impact of the baby boomers' retirement, a rudimentary analysis with available data shows that the potential impact is enormous.

Using conservative assumptions based on average 10-year historical STRS membership growth and the average membership retirement age of 60, we estimate that the annual retirement *rate* for K-12 teachers could increase from 2% in 1998-99 to a high of 5.3% by 2007. The increasing rate of retirement would stimulate, from 1999 through 2008, a cumulative demand for 53,000 teachers.[14]

Factors Fueling Demand: Class Size Reduction (CSR)

Despite existing shortages of qualified teachers in California classrooms, policy-makers implemented CSR in 1996 to address the problem of large classes and to lower student-teacher ratios in the primary grades. By 1998-99, the third year of CSR implementation, nearly all first- and second-grade students, 80% of kindergartners, and 74% of third-grade students were in

classes of 20 students or fewer.[15] Lowering class sizes in these grades forced many districts in the state to hire additional teachers. Statewide, the CSR initiative created a need for approximately 18,400 new elementary teachers in 1996-97, its first year of implementation—in addition to the approximately 16,000 elementary teachers hired for normal replacement and growth needs.[16] This represented a 115% increase in the demand for new elementary teachers over the previous year.[17] An estimated 7,800 additional teachers had to be hired to fully implement CSR in the second year of implementation, 1997-98.[18] In addition, the 1998 augmentation of the 1989 Morgan-Hart Class Size Reduction Act aimed to reduce class sizes in ninth-grade core subject areas and resulted in increased demand for single-subject high school teachers.

Our projections of teacher demand (Figures 2-1 and 2-2) rely on a stable pupil-teacher ratio that assumes full implementation of CSR in K-3 and in grade 9 in the core subjects. As noted above, we project that California will need to hire 287,000 new teachers through school year 2007-08. Next, we turn to the supply side of the supply and demand equation.

The Supply of Qualified Teachers in California Classrooms

Here we examine historical data on the supply of teachers and present projections of future supply. These projections include estimates of the impacts of recent key policy initiatives meant to increase teacher supply.

We define the supply of teachers as the number of teachers who hold preliminary or professional clear credentials as specified by California's Commission on Teacher Credentialing (CTC) requirements *and* who are willing to take jobs for the salary, assignment, location, and working conditions offered. Our supply count does not include those who are teaching with emergency permits, waivers, or internship credentials from the CTC. As such, the supply includes: (1) the base of veteran credentialed teachers remaining in the workforce at the beginning of each school year, (2) "new" teachers entering the workforce for the first time, and (3) "reentrant" teachers who hold credentials and are returning to the profession after a period of absence.

A larger *supply pool* of individuals who hold teaching credentials but who are not teaching exists. This supply pool consists of those who left the profession, those who completed teacher preparation programs but did not take teaching jobs, and those who hold credentials from another state and are not teaching in California. These individuals, though qualified, choose not to teach for a variety of reasons that presumably include higher salaries in competing industries, working conditions, location, and teaching assignments available. There are no estimates of the size of the

supply pool, but arguably policies directed at economic factors might draw these qualified individuals into teaching.[19]

Below, we describe what is known about the participation of veteran teachers, newly credentialed teachers, and reentrants in the workforce.

The Base of Veteran Credentialed Teachers

The base of veteran credentialed teachers at the beginning of a given school year is equal to the number of teachers in the workforce from the previous year minus normal attrition and retirement, and minus teachers with emergency permits, waivers, or internships.

Thus, for example, at the end of the 1997-98 school year, there were approximately 270,000 teachers in California classrooms. We estimate that approximately 22,000 retired or left the profession (approximately 8%) and more than 26,000 held emergency permits, waivers, or internship credentials. Thus, at the beginning of the 1998-99 school year, the base of veteran credentialed teachers remaining in the workforce from 1997-98 was about 222,000.

New Teachers Entering the Profession

Each year, the base of veteran teachers is augmented by "new" credentialed teachers. In 1997-98, the California Commission on Teacher Credentialing issued approximately 17,000 new multiple- and single-subject teaching credentials to individuals recommended by teacher preparation programs. The actual number of newly credentialed teachers who take vacant positions each year, however, is not equivalent to the total number of new credentials. Many recent graduates of California teacher preparation programs do not apply for teaching positions the following year.* The exact number of first-time, in-state credential holders who actually enter the teaching force each year is hard to estimate. Because neither the state nor teacher preparation programs track the employment of these individuals, estimates must be made from limited data collected at the district level. Estimates of how many preparation program graduates actually enter the workforce go as high as 70% based on national data[20] and down to around 50% based on California data.[21]

Of the approximately 17,000 individuals who completed a teacher preparation program in 1998-99, only 8,500 would have entered the teaching force in the fall of 1999, assuming a 50%

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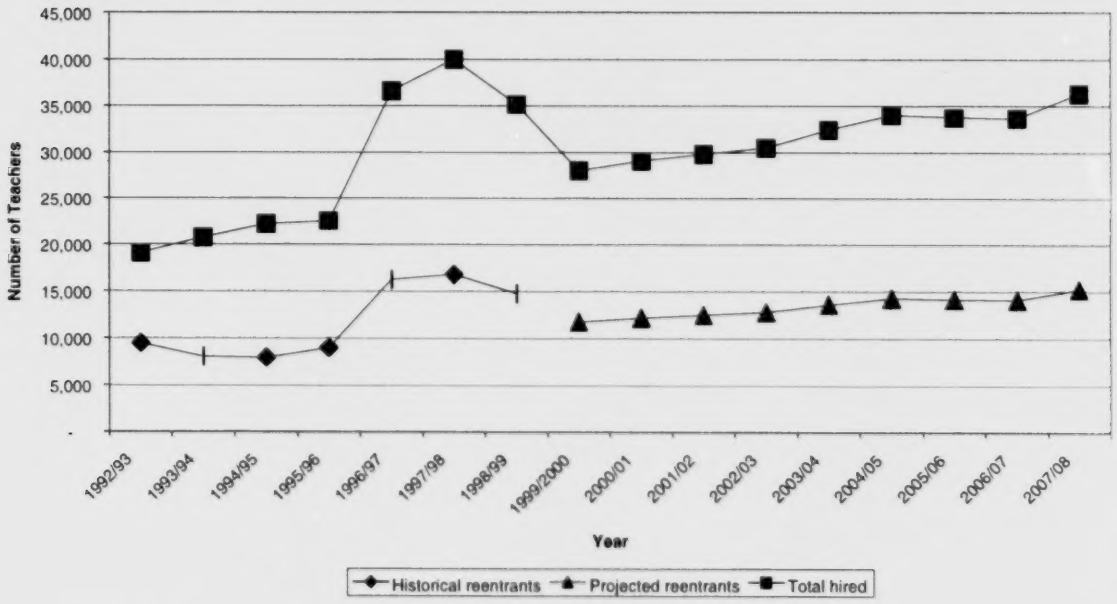
* Out-of-state teachers who apply for temporary credentials typically have high prospects of employment—it is for that reason that they make their application. Thus, we assume that the vast majority of out-of-state teachers who receive credentials actually go on to teach.

participation rate, and 11,900 using the 70% assumption. In the projections presented here, we estimate the impact of both 50% and 70% participation of newly credentialed teachers.

The Influx of Reentrants to the Teacher Workforce

Many teachers leave the profession early in their careers—whether for personal reasons (to raise a family), professional ones (to pursue other career interests), or economic ones (to pursue more lucrative jobs). These teachers make up a large part of the supply pool of qualified teachers. Some portion of the supply pool reenters the workforce each year, supplementing the number of newly credentialed teachers just graduating from training programs. Following the methodology of other workforce projections,[22] we estimate that reentrants comprise just over 40% of new hires. As Figure 2-3 indicates, reentrants remain a critical source of qualified teachers in projecting the size of the teacher workforce through 2007-08.

Figure 2-3
Estimated Historical and Projected Reentrants vs. Total Teacher Hires, 1992-2007



Source: Fetler (1997); CDE (1997); SRI analysis.

There is little data on the employment decisions of these individuals, making it difficult to determine under what conditions they reenter the workforce. Economic factors such as salary and location may influence the decision, as well as professional considerations such as teaching

assignment and working conditions. The number of reentrants did surge with class size reduction as teaching positions opened up in every community in the state. Other potential policy initiatives, such as increasing teachers' salaries, might attract more of these individuals back into the profession, as well.

Projecting the Supply of Qualified Teachers in California Classrooms

Projecting the size of California's teaching force depends on a series of assumptions that can be based only in part on historical data. Not only do we need to estimate the numbers of veteran and new teachers who remain in the teaching force, we also must project potential impacts of new policies. In the wake of class size reduction and the attendant spike in the demand for classroom teachers, state policy-makers have enacted a series of initiatives to address the supply of qualified teachers. It is impossible to estimate the impacts of many of these initiatives, but we have sufficient information to project the impacts of two promising policy initiatives from the 1998 legislative session: the expansion of the Beginning Teacher Support and Assessment program, designed to reduce attrition, and the expansion of the capacity of the CSU system, intended to produce a greater number of newly credentialed teachers. The projections presented here do not take into account other policies designed to address aspects of supply for which we have no historical data to project impact.

Incremental Impact of BTSA Expansion. The Beginning Teacher Support and Assistance program provides fully credentialed first- and second-year teachers with opportunities to deepen their pedagogical content knowledge and skill with the assistance of support providers—more experienced and expert teachers. SB 2042 (1998) requires that all teachers who receive preliminary credentials participate in a formal induction program to receive their clear credential. The 1999-2000 budget provided $72 million for BTSA programs, up from $17.7 million in 1997-98, to support all teachers in their first 2 years of teaching.

Pilot studies of BTSA's precursors, such as the California New Teacher Project (CNTP), showed higher retention rates among those teachers who volunteered to participate in an induction program than among nonparticipants. Eighty-seven percent of CNTP teachers returned to teach in the same district for a second year, and 81% for a third year, both much higher than national averages. Even higher percentages remained in the teaching profession, even if they changed districts.[23] The expansion of BTSA to all new teachers is meant to reduce the attrition rate among teachers in their first 5 years of teaching

Because this historical data represents the results of pilot programs, we are uncertain of the degree to which the scaled-up program will have similar results. Consequently, we present high

and low estimates of the future impact of the BTSA legislation on the size of the teacher workforce. High estimates assume that expanded BTSA programs will be almost as successful as they have been in the past, at an 80% 5-year retention rate and a participation rate of 70% of newly credentialed teachers. Under these assumptions, we estimate that improved retention of new teachers produces a cumulative increase of 104,000 teachers from 1999-2000 to 2007-08, so that by the year 2007, almost 27,000 teachers will be in the workforce who otherwise would not be. At a 60% 5-year retention rate and 50% participation of newly credentialed teachers, low estimates assume a lower effectiveness of expanded BTSA programs but recognize improvements over the historical 50% 5-year retention rate of new teachers. The low assumption results in an additional 25,000 teachers over the same period of time, and an incremental increase of almost 6,500 in 2007.

Increasing CSU's Capacity to Prepare Additional Teachers. The California State University system has historically been the state's largest producer of teaching candidates. Throughout the 1990s, as we will explore in Chapter 4 of this document, CSU-recommended new credentials have remained relatively flat while both the absolute number and the percentage of the total credentials produced in independent schools have increased.

In response, the state augmented CSU's funding to increase its production of credentialed candidates. CSU plans to produce a total of 15,000 credentialed graduates per year by 1999-2000, up from 11,736 in 1996-97 and almost 13,900 in 1997-98.[24] Because the majority of new credential growth has been among the independents at much higher tuition fees than those CSU charges, we can expect that prospective teachers who otherwise would have enrolled in independent institutions of higher education (IHEs) will fill some percentage of the new CSU positions. Thus, the announced expansion does not realistically represent the net number of new credentials. We use sensitivity analysis to estimate the impact of the new CSU positions under several scenarios—from 100% (i.e., 0% shift from independents) to 50% new positions—and assume that all new teachers participate in the expanded BTSA programs discussed above. Under a moderate assumption of 75% new positions (i.e., 25% shift from independents), the cumulative number of new teachers entering and staying in the workforce through 2007-08 as a result of the CSU expansion policy is 18,500, assuming low BTSA impact and 50% participation of newly credentialed teachers, and 29,000 assuming high BTSA impact and 70% participation.

The Promise of Other State Policies to Affect the Supply of Fully Credentialed Teachers

Other state policies enacted in California in recent years aim at lowering entry barriers to the teaching profession. Without any historical data, however, their impacts are extremely difficult to quantify. They will need to be tracked in the ensuing years to accurately gauge whether the measures are sufficient to meet the remaining gap and to end the need for emergency permits within a reasonable time. Three types of programs appear especially promising in that they may increase the supply of teachers in the next few years: those that support uncredentialed teachers, those that lower barriers for out-of-state teachers, and those that offer financial incentives to current and prospective teachers.

Support for Uncredentialed Teachers. The Intern and Pre-intern programs support practicing teachers who have not yet completed a teacher preparation program and who do not hold a preliminary teaching credential. Both aim to support and retain these individuals in the classroom, as well as get them through a preparation program. Individuals qualify for intern status if they have a baccalaureate degree and have passed the California Basic Education Skills Test (CBEST) and subject matter requirements. While teaching full-time, interns also engage in a planned course of study with expert teachers or IHE faculty. In 1999-2000, the intern program is funded at $11.0 million to serve 7,300 interns.

Introduced in 1998, the Pre-intern program targets individuals on emergency permits who have not met subject matter requirements and typically have had no previous teaching experience. The program is supposed to help pre-interns meet subject matter requirements, as well as give them basic classroom management strategies and instructional methods. In 1998-99, the CTC issued approximately 250 pre-intern certificates. For 1999-2000, the legislature has earmarked $11.8 million to serve 6,000 pre-interns.

Lowering Barriers for Out-of-State Teachers. Passed in 1998, AB 1620 will reduce the barriers that teaching candidates credentialed outside of California face in accepting teaching positions in California. The CTC is in the process of evaluating other states' teacher preparation standards and so far has identified nine states with standards that are equivalent to California's. Credentials from institutions in these states will be recognized in California, and the bill will also simplify the process for those from states whose standards are not equivalent to California's. With lower entry barriers, teaching in California may be a more attractive alternative for out-of-state graduates than it previously was.

Financial Incentives. Several recent initiatives aim to increase teacher recruitment and retention with financial incentives, either student aid or salary enhancements. In 1998, the Cal

Grant T Program was initiated, providing $10 million in awards for prospective teachers enrolled in teacher preparation programs. Funding allows for up to 3,000 awards annually—approximately $1,600 for CSU students, $3,600 for UC students, and $9,000 for students at independent institutions. This program may increase access to teacher preparation programs and increase the pool of credentialed teachers.

The Assumption Program of Loans for Education (APLE) assumes educational loans for students who promise to enter the teaching profession and agree to teach in a subject area with teacher shortages or in schools that serve large populations of students from low-income families. In 1998, the number of APLE warrants was expanded from 400 to 4,500. In addition, the program was expanded to require participants to teach for 4 rather than 3 years in a California public school, a feature aimed at retaining teachers through the first few critical years. In the first year, the program assumes $2,000 of a teacher's student loans. In years 2 to 4, the program assumes $3,000 of a teacher's loans, for a total of $11,000 over 4 years. The APLE program is designed to increase recruitment and retention of new teachers.

A new program initiated in 1999 offers financial incentives to districts to increase their minimum teacher salary to at least $32,000. The Beginning Teacher Salary Incentive Program provides funds only to increase salaries of teachers who hold a valid teaching credential, and cannot be used to pay teachers on emergency permits or waivers. As with the Cal Grant T and APLE programs, this program is expected to have a positive impact on the number of teachers attracted to and retained in the profession.

Other Policies. Other policies expected to have some marginal impact are: accreditation of out-of-state preparation programs with satellite campuses in California, the California Math Initiative, blended 4-year teacher preparation programs, and CalTeach. In addition, CSU launched a new credential program, CalStateTEACH, in the fall of 1999. This 18-month program will use the Internet, school site mentors, and site-visiting faculty supervisors, and aims to certify up to 1,000 teachers per cohort currently working on emergency permits.

In aggregate, policies designed to help underqualified teachers get credentials and remain in the profession, to lower barriers to teachers from other states, and to increase the financial incentives to enter the profession can be expected to have a positive impact on the supply of qualified teachers willing to take jobs in the state's schools. Unfortunately, because these programs are only beginning to be implemented, their implementation is quite uneven (for example, many districts have not chosen to accept the incentive to raise beginning teacher salaries) and because we have no historical data on which to base estimates of their impact, we do not include their potential effects in the projections presented here.

Putting Supply and Demand Together

Given historical trends and our projections of the future supply of and demand for qualified teachers, will California have a sufficient number of teachers to fill the state's classrooms? Such an analysis has to begin with recognition of the fact that California has long suffered from a shortage of fully credentialed teachers willing to teach in its classrooms. At the beginning of the 1990s, 12,200 classroom teachers held emergency permits, representing about 5.5% of the teacher workforce.* This figure remained steady through the first half of the decade until the implementation of class size reduction, when the number of teachers with emergency permits increased to over 18,000 in 1996-97 and climbed to over 28,500 in 1998-99 (Figure 2-4). Currently, we estimate that about 10% of California classrooms are staffed by teachers holding an emergency permit.

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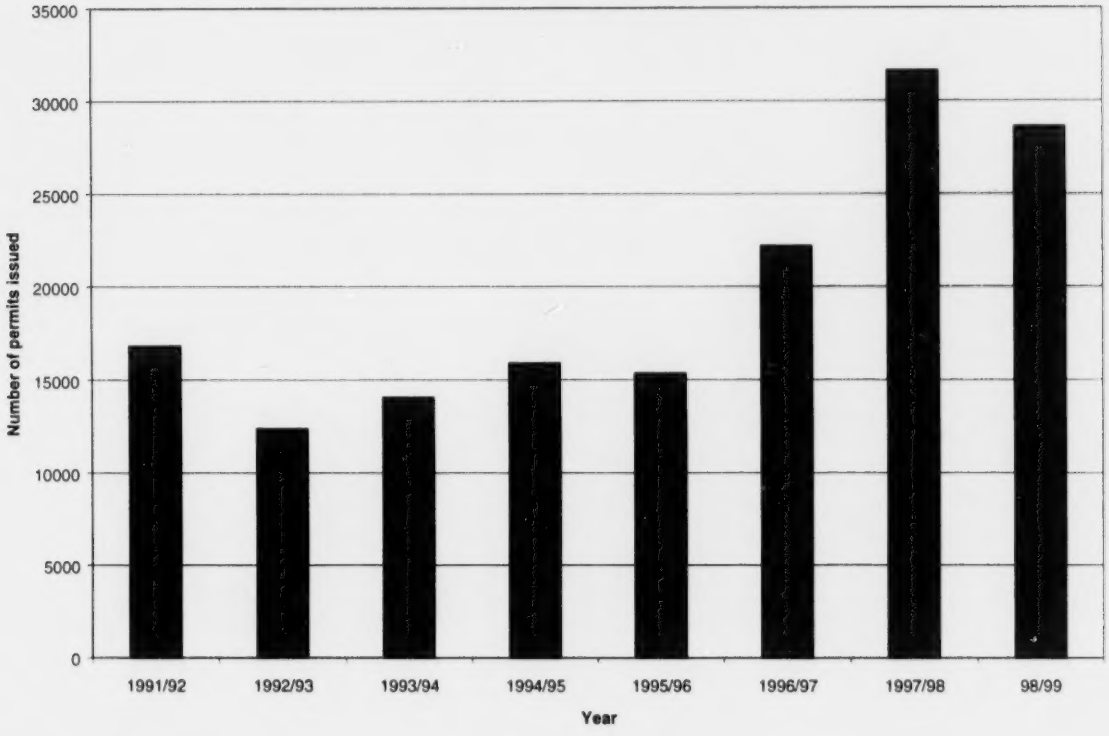
* The minimum requirements for an emergency single- or multiple-subject teaching permit are completion of a bachelor's degree, passage of the California Basic Education Skills Test (CBEST), and verification of subject matter competence at a level established in regulation for the emergency permit. Individuals serving on an emergency permit must enroll in a CTC-approved professional preparation program for the credential and complete a minimum of six semester units of coursework each year to renew the permit. Emergency permits can be renewed for only five consecutive years, after which individuals on emergency permits wishing to remain in teaching must achieve a preliminary or professional clear credential.

Figure 2-4
Total Emergency Permits, 1991-92 to 1998-99[a]



Source: CTC.[25]

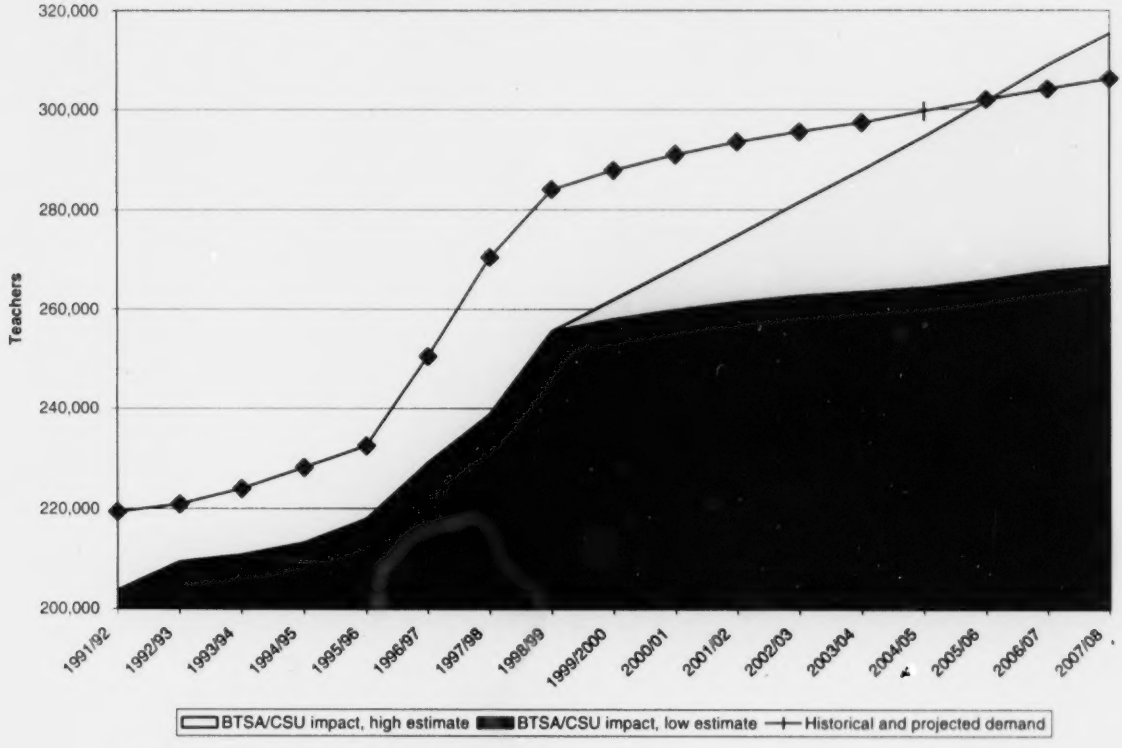
[a] Preliminary data for 1998-99. The CTC anticipates that the actual count will be slightly higher.

In addition to emergency permits, there are two other categories of working teachers who have not completed the minimum state requirements for a basic teaching credential and whom we therefore define as underqualified: interns and waiver holders. Interns are individuals who are teaching while concurrently enrolled in a teacher preparation program. We discuss interns further in Chapter 4. Waivers are issued when teacher candidates cannot meet or have not yet met the requirements for an emergency permit. In 1997-98, according to data collected by the California Department of Education, 12% of the credentials held by teachers working in California's classrooms were emergency permits, intern certificates, or waivers.[26] Although complete data is not available for 1998-99, the preliminary estimate of emergency permits issued by the California Commission on Teacher Credentialing is approximately 10% of the current size of the teacher workforce. As in previous years, we would conclude that the total percentage of working teachers who are underqualified—that is, emergency permit holders, waiver holders, and interns

combined—is more than 10%. Future demand for teachers includes the replacement of these individuals with fully credentialed teachers.

Finally in Figure 2-5, we present our estimate of the supply of credentialed teachers participating in the workforce relative to overall demand through the year 2007-08. We project two estimates of the future teacher workforce, based on the assumptions we described in this chapter, combined with high and low estimates of the impact of BTSA and CSU expansion.

Figure 2-5
Projected Teacher Workforce through 2007-08



Sources: Fetler (1997); CDE (1998); SRI analysis.

As Figure 2-7 shows, under the most optimistic scenarios of high participation of newly credentialed teachers, BTSA expansion, and CSU expansion, the gap between supply and demand is projected to remain until 2006. Using the low-impact estimates, the gap grows to 37,000 in 2007-08, to be filled by underqualified teachers. These projections incorporate the estimated impact of the retirement of baby boomers. Although the total number of emergency permits

issued may drop or even be eliminated in the medium term, it will by no means be insignificant in the next few years.

The above projections illustrate the difficulty of estimating the supply of California's teaching force and can be refined only with better data tracking. The incompleteness of data on supply factors, in particular, necessitates a range of assumptions that cloud the answer as to whether there will be enough qualified individuals willing to take the jobs offered to replace the existing large numbers of emergency permit holders and to meet new demand.

Given the high stakes involved for students—not being able to graduate from high school if they cannot meet state standards—we believe that the state should not rely on the outside hope that the most optimistic scenario will prevail. Importantly, it seems likely that large numbers of emergency permits will be necessary for a number of years; even under the most optimistic scenario, today's first-graders will be in junior high before the gap is closed. Moreover, because the shortages of teachers willing to take jobs are not evenly distributed across geographic or content areas—as discussed in the following chapter—even optimistic scenarios about the aggregate number of teachers in the state will not necessarily translate into qualified teachers in every classroom.

Endnotes

[1] California Department of Education (CDE), Educational Demographics Unit, Research, Evaluation and Technology Division. (1997, August). *Number, percent, and average salary of new teachers in California public schools: 1981-82 through 1996-97 (one year of total educational service).* Sacramento, CA: Author.

[2] CDE, Educational Demographics Unit. (1999). *Statewide classroom teacher credential and experience report for the year 1998-99.* Sacramento, CA: Author.

[3] CDE, Educational Demographics Unit. (1997, January). *Count of certificated and classified staff in California public school districts*, in the California Basic Educational Data System (CBEDS), in Fetler, M. (1997, January). Where have all the teachers gone? *Education Policy Analysis Archives, 5*(2).

[4] CDE. (1997, August). SRI analysis follows the methodology in Fetler (1997, January).

[5] National Center for Education Statistics. (1997). *Projections of education statistics to 2007.* Washington, DC: Author.

[6] State of California, Department of Finance. (1998, December). *Historical state population estimates with components of change and crude rates, July 1, 1941–1998.* Sacramento, CA: Author.

[7] State of California, Department of Finance. (1998). *California public K-12 enrollment projections by ethnicity, 1998 series.* Sacramento, CA: Author.

[8] CDE, Educational Demographics Unit. (1999). *Statewide enrollment in California public schools by ethnic group, 1998-99.* Sacramento, CA: Author.

State of California, Department of Finance. (1998, December).

SRI analysis.

[9] Cohen, D. K., & Das, H. (1996, July). *The need for teachers in California* (Working paper series, Policy Analysis for California Education). Berkeley, CA: University of California at Berkeley.

Fetler (1997, January).

[10] Although we do not have hard data on when in their career trajectories teachers actually leave the profession, others have estimated that as many as 50% of all new teachers leave the profession within the first 5 years. See CSU Institute for Education Reform. (1996, September). *A state of emergency ... in a state of emergency teachers.* Sacramento, CA: Author. The SB 1422 Advisory Panel reported that 30% to 50% of teachers leave within the first 3 years. See also Fetler (1997, January).

[11] Cohen & Das (1996) and Fetler (1997, January).

[12] California State Teachers' Retirement System (STRS). (1998). *Population information for fiscal year 1997-1998.* Sacramento, CA: Author.

SRI analysis. STRS data includes community college teachers as well as K-12 teachers.

[13] STRS (1998).

[14] The retirement rate as a percentage of the K-12 teaching force should start to decrease beginning in 2007, the point at which the largest cohort of baby boomers, aged 52 in 1999, will pass the average retirement age of 60. The retirement rate will flatten out, signifying the end of the "bulge" when those aged 41 in 1999 reach the average retirement age of 60 in 2018.

[15] Bohrnstedt, G. W., & Stecher, B. M. (Eds.). (1999). *Class size reduction in California: Early evaluation findings 1996-98 (CSR Consortium, year 1 evaluation report).* Palo Alto, CA: American Institutes for Research.

CHAPTER 3. DISTRIBUTION OF UNDERQUALIFIED TEACHERS

DISTRIBUTION

How are underqualified teachers distributed in California schools and districts?

- 24% of schools have no underqualified teacher, and another 15% have fewer than 5%. In contrast, 20% of California schools have more than 20% underqualified teachers—these schools, and the students in them, face serious problems.
- Students in low-performing schools with high percentages of poor, minority, and English language learner students—those students who need the most assistance—are most likely to have underqualified teachers.
- The problem of underqualified teachers is not isolated to a few large districts. Almost one in eight California districts have over 20% underqualified teachers across all of their schools.
- The distribution of underqualified teachers within a district varies, depending on size and diversity, but in larger districts there is typically a subset of schools with extremely high concentrations of underqualified teachers.

COMPOSITION

Who comprise the population of underqualified teachers throughout the state?

- Some underqualified teachers are hired purposefully and strategically, because they are promising candidates or have special characteristics that match district priorities.
- Other underqualified teachers are hired as a result of shortages of credentialed teachers in certain subject areas, such as special education, bilingual education, math, and science.
- A third group of underqualified teachers are those who are hired because districts are desperate to fill classrooms and unable to find fully qualified teachers.

What is the impact of high concentrations of underqualified teachers on schools?

- Large concentrations of underqualified teachers negatively affect school and district functioning and undermine working conditions, teacher professional culture, and student learning.

DISTRICT ACTION

What are the possibilities and limitations of district actions to reduce the number of underqualified teachers?

- Districts act to reduce the number of underqualified teachers by offering financial incentives, creating strategic partnerships with universities, developing district-based preparation programs, recruiting aggressively, and streamlining hiring practices.
- The effectiveness of these district strategies is limited by factors beyond a district's control, such as its location and its inherent attractiveness to teachers.
- In addition, although some districts may be successful at attracting qualified teachers, they often do so by siphoning such teachers away from other, less attractive surrounding districts.
- District action alone cannot overcome the core problem of a too-small pool of qualified candidates who are willing to work in the schools that need them most.

We have shown that many California classrooms are staffed by teachers who have not met the minimum state requirements for a teaching credential. In this chapter, we ask the basic question: which students are taught by these teachers? If these underqualified teachers were evenly distributed across the state, each California student would have an approximately 1 in 10 chance of being in a classroom with an underqualified teacher. Yet, as we will demonstrate in great detail, these teachers are concentrated in schools where students are in greatest need of high-quality instruction. Urban districts serving large numbers of poor and minority students are most likely to have high concentrations of underqualified teachers. In some schools, the problem is so severe that the majority of students attend class after class, year after year, without being taught by a qualified teacher.

We begin the analysis by examining how the current teacher shortage is distributed in schools throughout the state. We then examine which students are in classrooms and schools staffed by underqualified teachers. Next, we examine shortages at the district level and look at the distribution of underqualified teachers within some of the more heavily affected districts. Next, we step back and describe who the population of underqualified teachers are and their impact on schools, and examine the different reasons why they are hired. Finally, we examine district policies to reduce teacher shortages and the limitations of these policies.

Statewide Distribution of Underqualified Teachers

We define underqualified teachers as those who hold an emergency permit, waiver, or intern certificate. These teachers do not hold a full credential for their particular teaching assignment and have not completed a teacher preparation program and/or other requirements for their teaching assignment.*

Figure 3-1 shows the statewide distribution of underqualified teachers. There are many schools with no or relatively few underqualified teachers. Nearly 40% of the schools in the state have fewer than 5% underqualified teachers; 24% have no underqualified teachers at all. These are the schools in which, from our case study work, the number of underqualified teachers is not overwhelming the overall work of the school. At the other extreme, nearly one-fifth of California schools have 20% or more underqualified teachers.† This subset of the most critically affected schools enrolls about 21% of all California students—over 1 million children in total.

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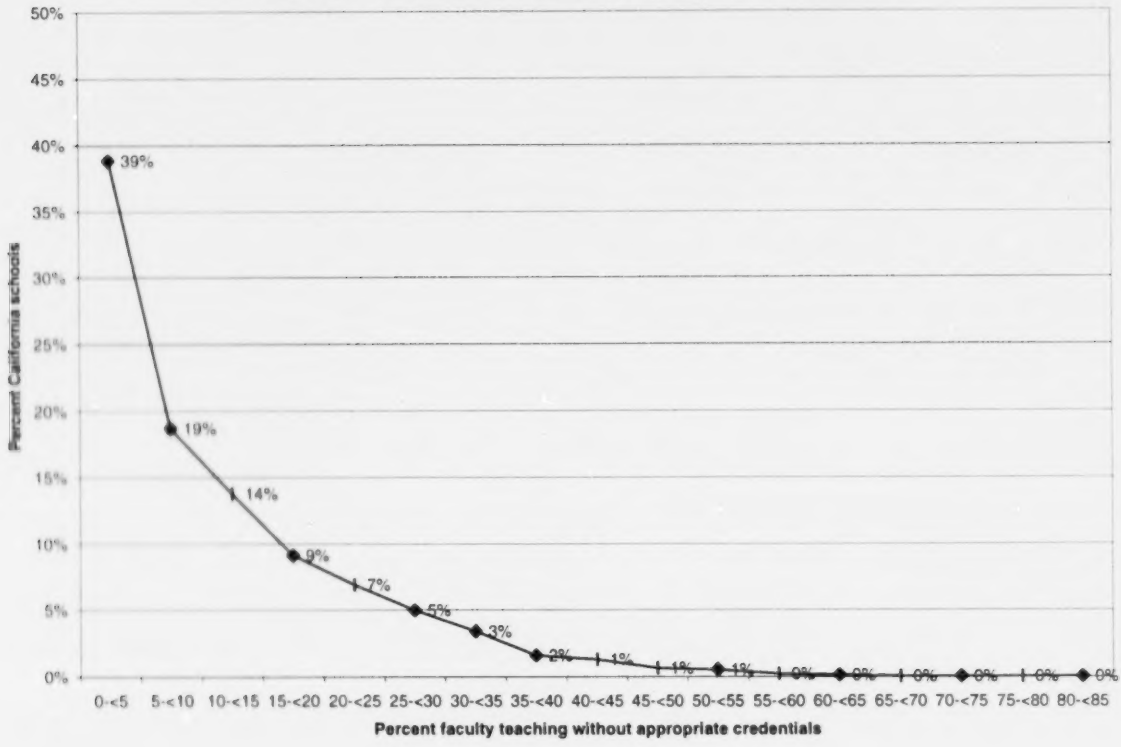
* A small percentage of emergency permit holders have a regular credential but have added emergency certification to teach an additional subject area. From 1991-92 to 1996-97, this averaged from 4% to 9% of all single- and multiple-subject emergency permit holders.

† The analysis in Figure 3-1 (and subsequent analyses on the distribution of underqualified teachers) uses data from school year 1997-98 and does not include adult, vocational, or other alternative schools.

Figure 3-1
Statewide Distribution of Underqualified Teachers



Note: There are one or two schools in each of the percentage categories above 65%. However, the schools in each of these categories constitute less than 0.5% and are represented as 0.0% in Figure 3-1.

Sources: CDE (1999); SRI analysis.[1]

As we will discuss later in this chapter, not all underqualified teachers are equally unprepared. There are some with relevant previous experience whom the school administration expects to be effective teachers despite their not having completed the requirements for their credential. Others are candidates who show exceptional promise or who meet particular district needs—many of these are teacher candidates who are close to finishing a preparation program. Others, however, are hired because administrators are desperate to fill classrooms and are unable to find qualified teachers.

As the percentage of underqualified teachers in a school increases, serious problems begin to arise. In schools with few underqualified teachers, these teachers tend to be hired for some desirable characteristics, and they are supported by a large portion of veteran teachers. In these schools, a limited number of children are affected by being in classrooms staffed by

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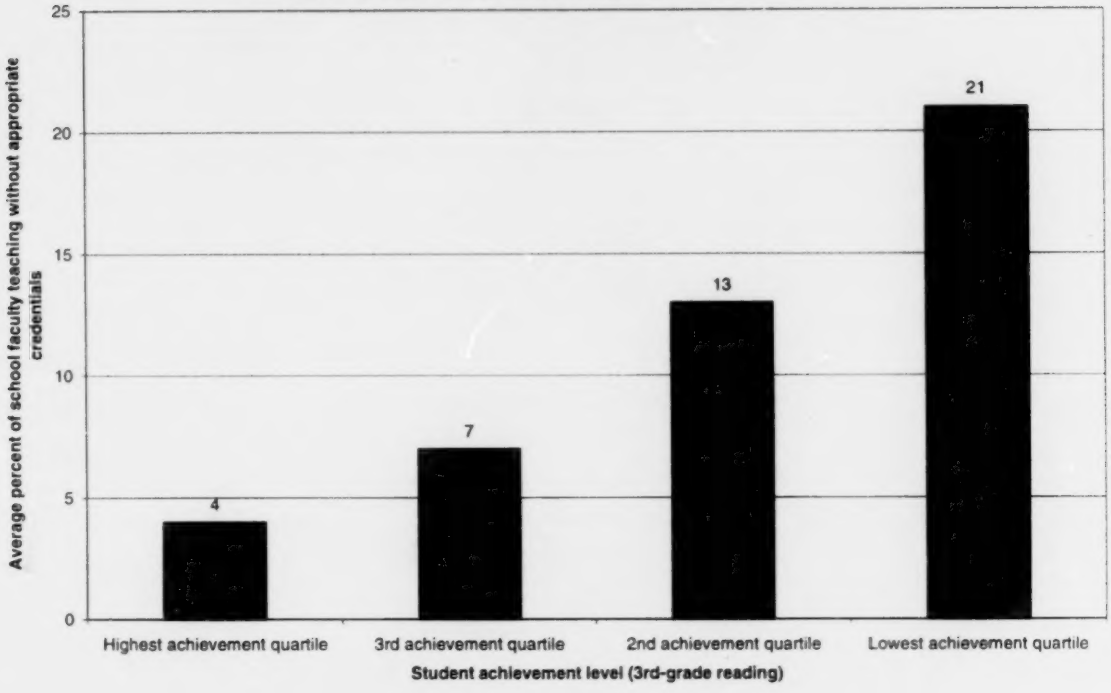
underqualified teachers. Although it is never appropriate for an underqualified teacher to lead a classroom, these teachers tend to complete their prep program and become fully qualified in a short period of time. In schools with high percentages of underqualified teachers, these teachers are more likely to have been selected just to fill classrooms, and there are fewer veteran teachers to provide support. More students are affected and for a longer period of time, since turnover is higher.

At some point, as the percentage of underqualified teachers grows, the school's overall functioning is impaired. The exact point at which this occurs depends on the strength of professional development and induction systems in the district and at the school, and the overall workplace support for adult learning opportunities within the school. However, we observed in case studies that schools with more than 20% underqualified teachers were hard pressed to provide adequate professional support to their entire faculty. These are the hard-to-staff schools in the state, those where a child's opportunities to receive the kind of instruction needed to meet the state standards are severely compromised. As noted above, one in five schools in the state fall into this category.

Maldistribution of Underqualified Teachers by Student Characteristics

Who are the children most likely to be taught by an underqualified teacher? In short, they are the students who can least afford it—those whose achievement puts them at risk of school failure without effective intervention. Analysis of third-grade reading scores on the SAT-9 shows that schools where students are achieving at the lowest levels in the state—essentially those schools where students are still struggling to learn to read well in third grade—have, on average, five times as many underqualified teachers as high-achieving schools (Figure 3-2). Statewide, those schools with the highest achievement in third-grade reading have, on average, only 4% underqualified teachers. About 900 schools fall into this category. In contrast, those schools with the most poor students and the lowest achievement in third-grade reading have, on average, 22% underqualified teachers. Nearly a thousand schools in the state fall into this category. These are the schools, as we noted above, that are the most dysfunctional and the least likely to support student learning.

Figure 3-2
Average School-Level Underqualified Teachers by Third-Grade Student Achievement Level

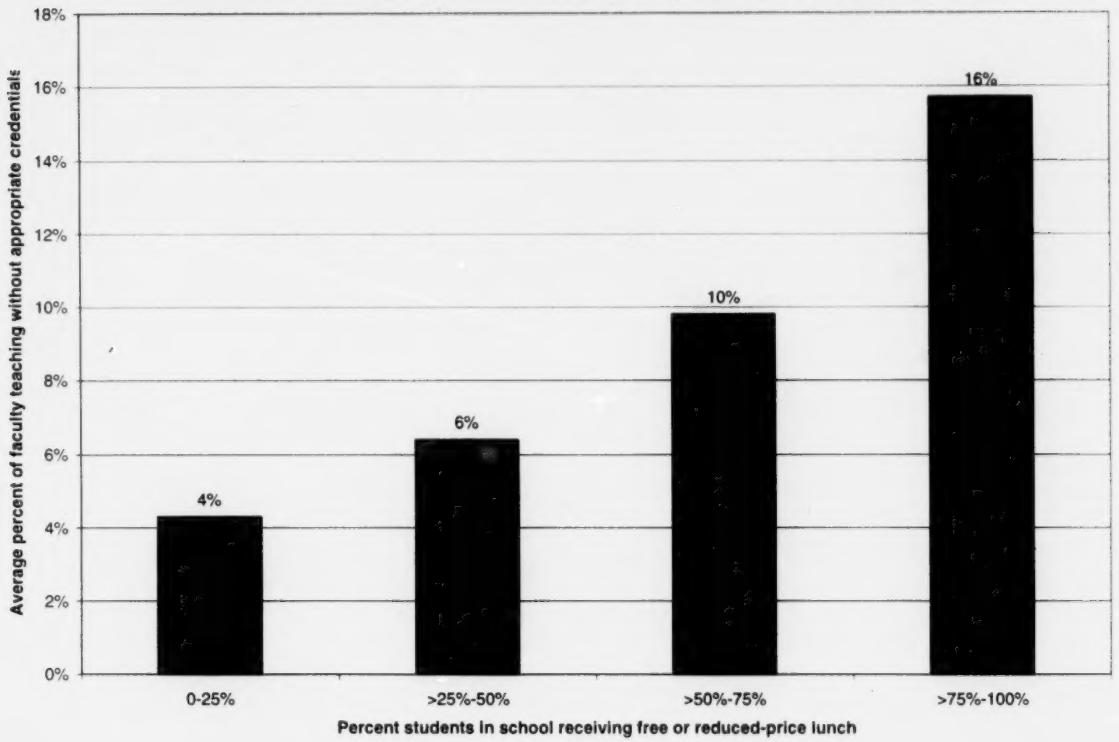


Sources: CDE (1999); CDE (1998); SRI analysis.[2]

Not surprisingly, the schools with the highest concentrations of underqualified teachers share other characteristics besides low achievement. These schools have more poor students, more minority students, and more students from homes where English is not the primary language. Such schools are concentrated to a greater degree in the state's urban areas.

Schools with the highest percentages of students receiving free or reduced-price lunch (a proxy for the poverty level of the student population) also have the highest percentages of underqualified teachers. Figure 3-3 shows that schools with the highest student poverty levels have an average of 16% underqualified teachers on staff. This compares with just 4% underqualified teachers in those schools with the lowest student poverty levels. It is important to note that about 1,700 schools—nearly a quarter of those in California—fall into the highest poverty category.

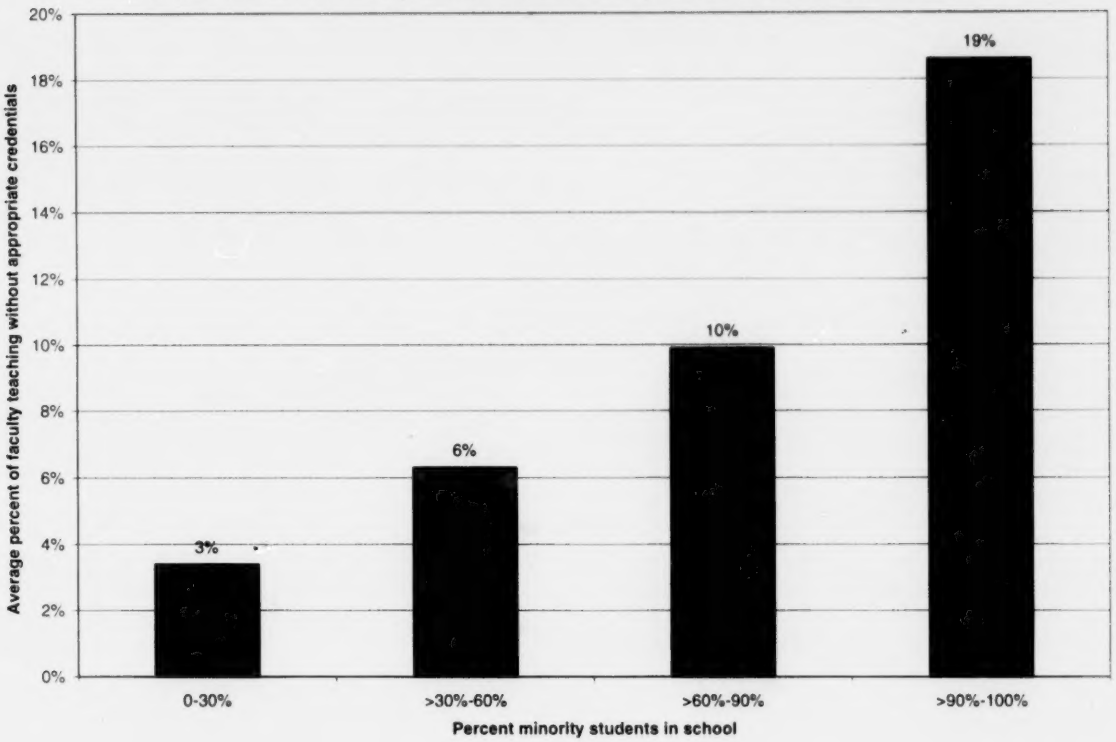
Figure 3-3
Distribution of Underqualified Teachers by Student Poverty Level



Sources: CBEDS (1999); SRI analysis.[3]

Similarly, Figure 3-4 shows that schools with more than 90% minority students have, on average, 19% underqualified teachers on staff. This group consists of more than 1,300 schools, or about 19% of all California schools. Schools with the fewest minority students have, on average, only 3% underqualified teachers. Similar patterns exist for limited English proficient (LEP) students, who typically are from minority groups and poor families.

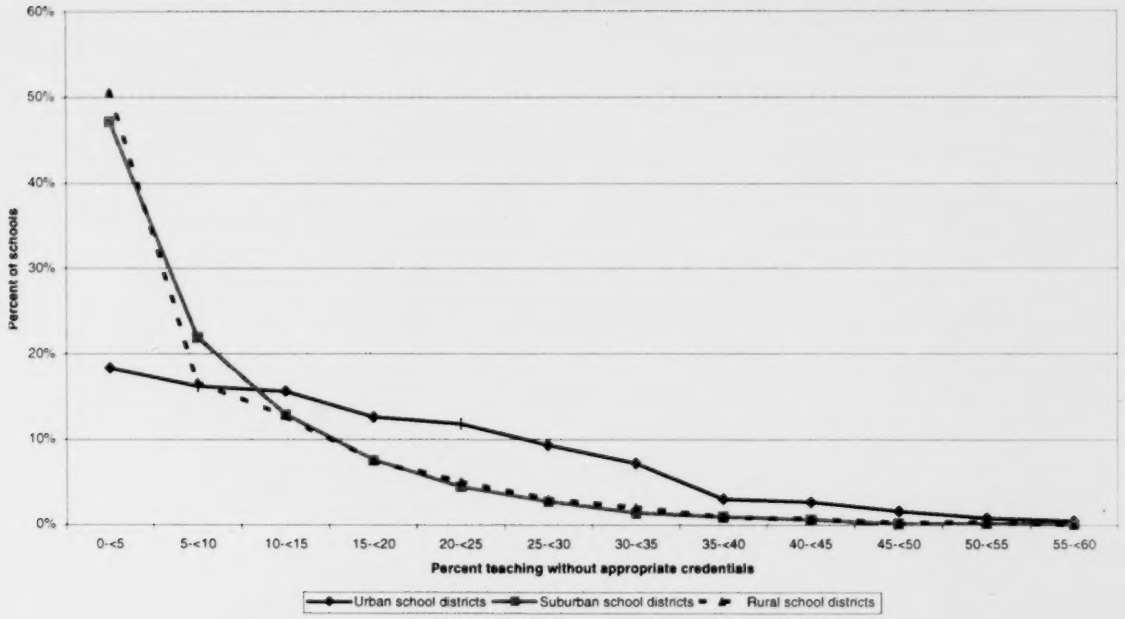
Figure 3-4
Distribution of Underqualified Teachers by Percent Minority Students



Sources: CDE (1999); SRI analysis.[4]

The distribution of underqualified teachers also varies by a number of school-level characteristics, including the urbanicity of the school site and the demographics of the student population. Overall, urban areas face more severe shortages than suburban and rural areas. Compared with the statewide average of 12%, urban schools had, on average, 17% underqualified teachers in 1997-98. Rural and suburban schools each had approximately 8% underqualified teachers. As Figure 3-5 shows, the distribution of underqualified teachers in rural and suburban districts is similar to the statewide distribution, with about half of schools having fewer than 5% underqualified teachers. In contrast, only about 18% of urban schools have fewer than 5% underqualified teachers. Even worse, 37% of urban schools have more than 20% underqualified teachers in their classrooms.

Figure 3-5
Comparison of Distribution of Underqualified Teachers by Urbanicity



Sources: CBEDS (1999); SRI analysis.[5]

These numbers make a compelling case: those students who currently are struggling in school and who are most likely to come from homes where, for economic and linguistic factors, parents are unable to compensate for poor schooling opportunities, are the least likely to be getting a high-quality instructional experience. In short, those students who are currently least likely to meet the new state standards are receiving the least help and therefore will be the most likely to fail to meet the new state graduation requirements in the future.

Distribution of Underqualified Teachers within Districts

Although concentrations of underqualified teachers are found most often in schools with large percentages of poor and minority students, they are not limited to a few large districts. Many districts are struggling with high concentrations of underqualified teachers. As Figure 3-6 shows, nearly half the state's school districts (48%) have fewer than 5% underqualified teachers (and 23% have no underqualified teachers at all). However, 12%, or one in every eight California school districts, have more than 20% underqualified teachers.

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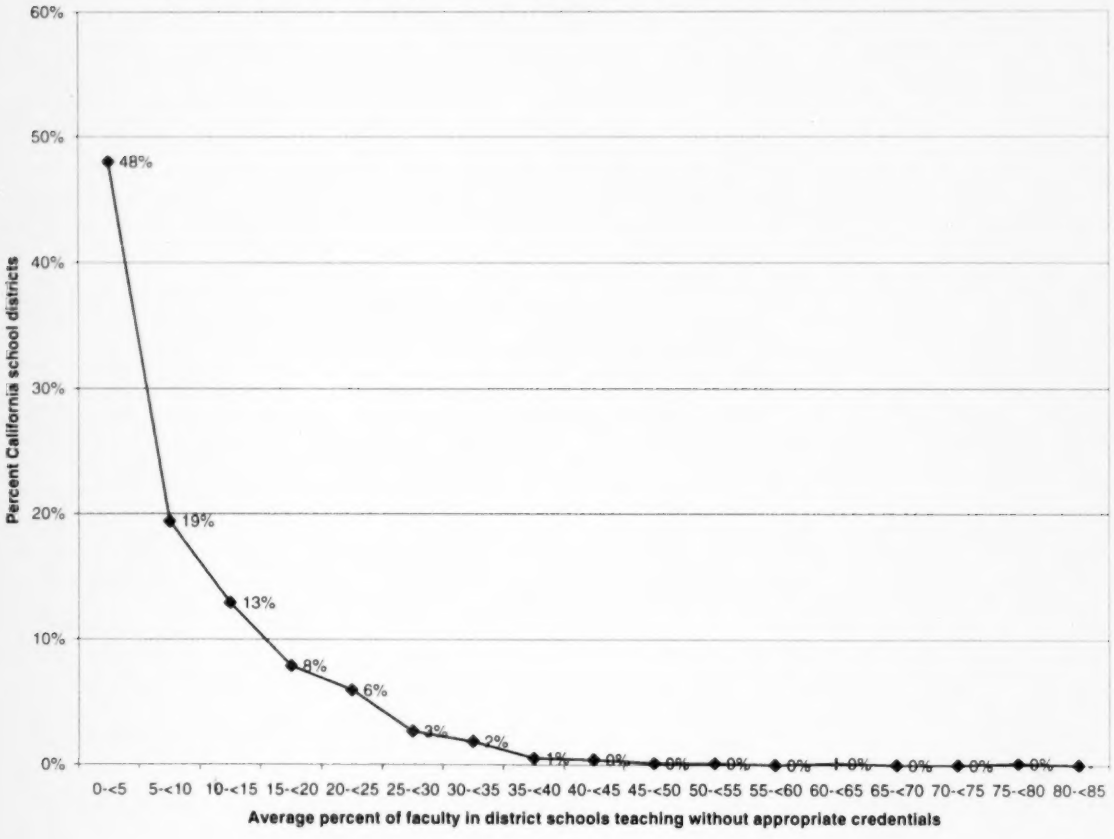
Figure 3-6
Distribution of Underqualified Teachers in California School Districts



Sources: CDE (1999); SRI analysis.[6]

Within districts with high concentrations of underqualified teachers, how teachers are distributed depends on the degree of diversity among district schools. In a geographically small district where all schools have similar economic and racial makeup, the concentration of emergency teachers is likely to be similar across all schools. For example, Ravenswood City Elementary School District in East Palo Alto has 11 schools located in a relatively compact geographic area. Schools in this district have an average of 38% underqualified teachers, and the distribution is relatively narrow. As Figure 3-7 shows, all Ravenswood schools have more than 20% underqualified teachers. Some Ravenswood schools are in worse shape than others—two have more than 50% underqualified teachers—but none have escaped the problem.

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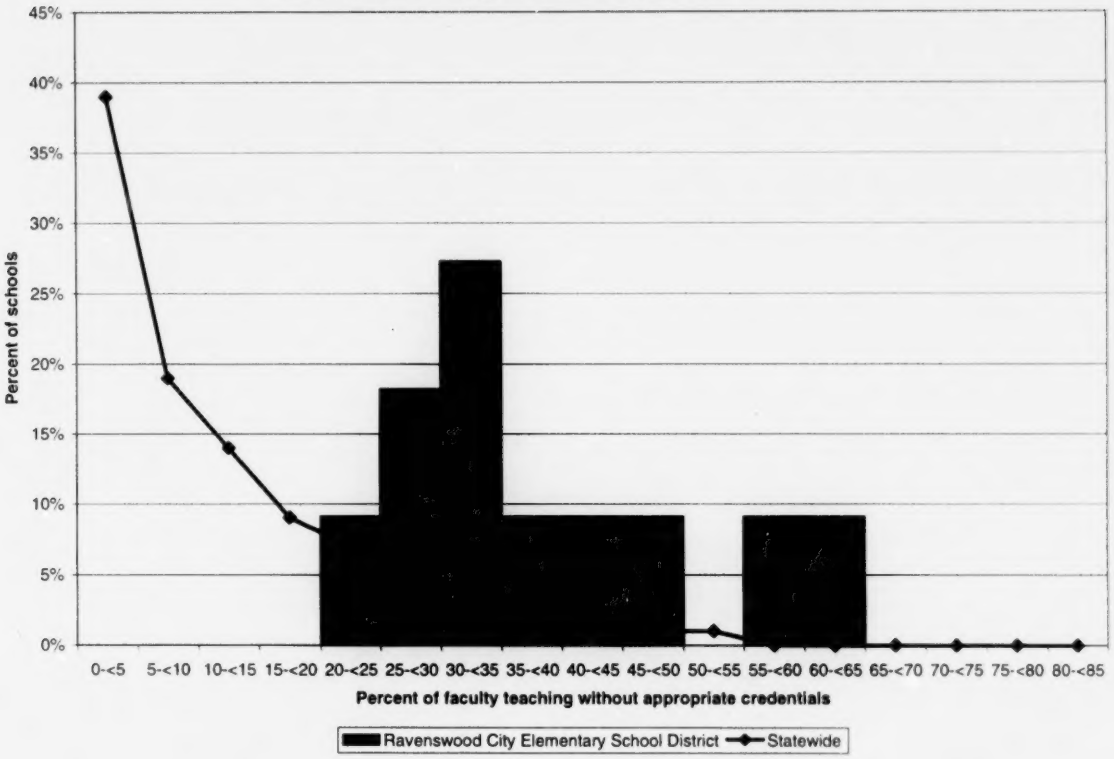
Figure 3-7
Comparison of Distributions of Underqualified Teachers Statewide and in Ravenswood City Elementary School District



Sources: CBEDS (1999); SRI analysis.[7]

In large districts with greater economic and racial diversity among schools, the distribution is broader. In Los Angeles Unified School District (LAUSD), for example, the district average is 25% underqualified teachers, but, as shown in Figure 3-8, this average is composed of schools on both ends of the spectrum—some schools have very few underqualified teachers, while others have more than 50%. Fully two-thirds of LAUSD schools have more than 20% underqualified teachers, creating serious problems at both the school and district levels. As at the state level, an overall percentage in a large district can mask extreme cases and an overall inequitable distribution.

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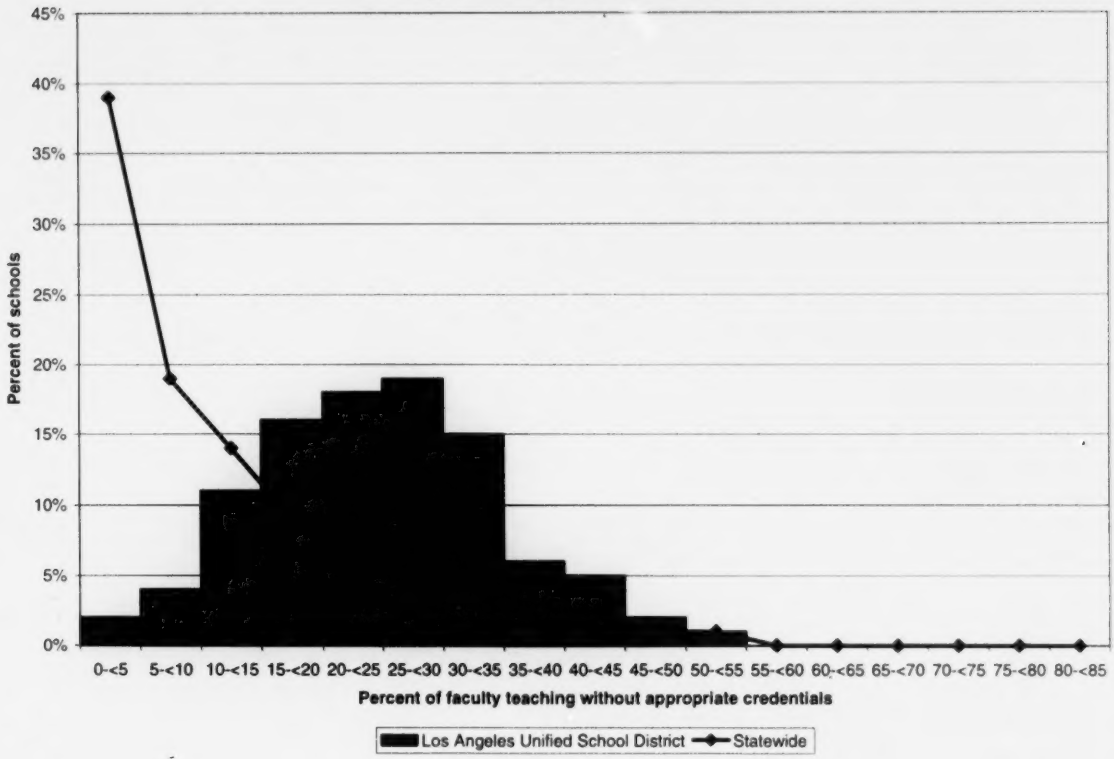
Figure 3-8
Comparison of Distributions of Underqualified Teachers Statewide and in Los Angeles Unified School District



Sources: CDE (1999); SRI analysis.[8]

Who Are Underqualified Teachers?

Underqualified teachers, by definition, do not hold the appropriate credential for their teaching assignment. Beyond that common characteristic, however, these teachers vary considerably in their preparation to teach. In this section, we describe what kinds of individuals are hired to teach without appropriate credentials and why.

Promising Candidates

Many districts, whether they are facing shortages or not, will hire underqualified teachers strategically to secure the employment of particularly promising candidates. The Selma Unified School District is an example of a district that uses the emergency credentialing process to hire promising candidates. Although they have 400 to 500 applications each year for around 35

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teaching positions, Selma officials report that they sometimes recruit strong candidates that have not yet completed their credential program. This is a strategic choice rather than a last-resort option. The underqualified teachers they hire are typically candidates they know well, who have demonstrated strong teaching skills in their student teaching assignments, and who come highly recommended by preparation program faculty. Often, these candidates have completed their coursework but have not yet finished their student teaching.

Far from being unhappy with such hires, Selma often makes special efforts to hire them. One teacher candidate credits the district superintendent with working "fervently" with the university to construct a special program for him to teach and get his credential at the same time. The district made special efforts to prepare and support him and even arranged for him to observe a well-known master teacher for 6 weeks in another district's year-round school before he entered the classroom. The district was impressed with the candidate and also delighted to find a male Latino interested in teaching elementary school. Rather than hold off and risk losing him to another district, Selma used the emergency process to hire him immediately.

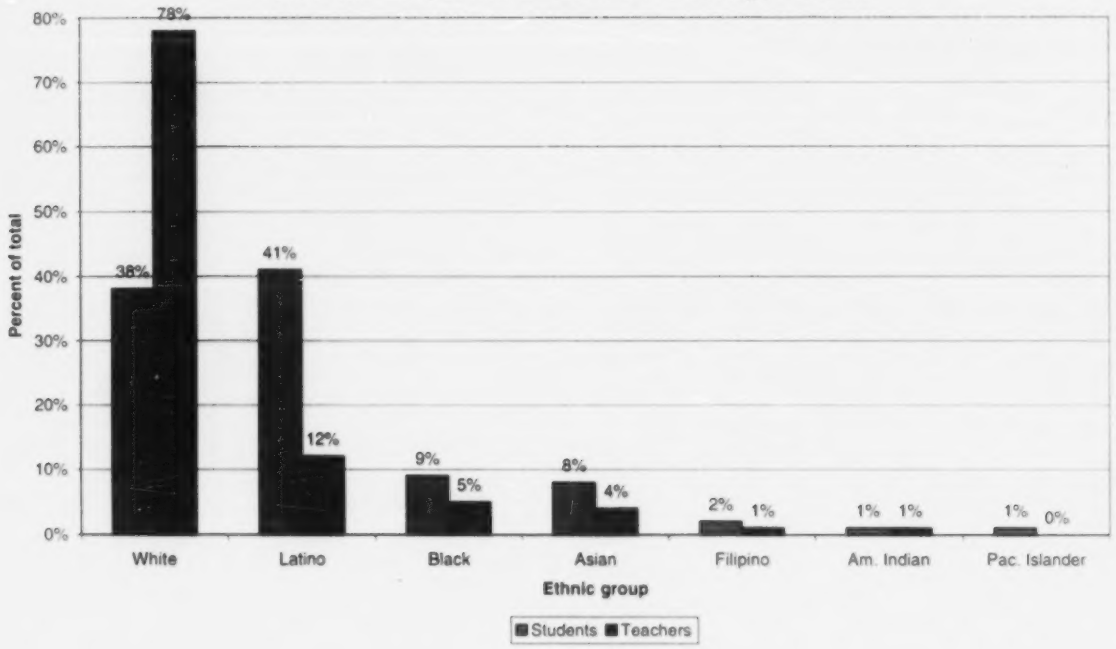
Elk Grove Unified School District is another district where promising candidates are hired before they earn their credentials. In Elk Grove, these candidates are often part of the district's Teacher Education Institute (TEI), a teacher preparation program run by the district in conjunction with San Francisco State University. TEI participants are well known to district officials and school principals. When openings occur during the school year, the most promising candidates are offered full-time teaching positions while they finish their coursework. Here again, the district is in control of the situation and is able to distribute these teachers evenly across the district so that no schools are overwhelmed with large numbers of underqualified teachers. Despite the fact that Elk Grove is the second-fastest-growing school district in the country, almost 90% of its schools have fewer than 10% of their teachers in the underqualified category.

A variation on the promising candidate is the case of the well-qualified teacher who does not happen to have a credential. In these rarest cases, the emergency teacher has developed outstanding teaching skills and strong content knowledge without the assistance of a traditional preparation program. For example, one district we visited had hired a native French speaker with an advanced literature degree from France to teach high school French. She had no appropriate credential, but was viewed by the districts as well qualified to teach high school French literature.

Candidates Who Fill District Priorities

Many districts hire underqualified teachers as a way of meeting a particular school or district priority, such as ethnic diversification of their faculty. As Figure 3-9 shows, there is a statewide mismatch between the ethnic makeups of the student population and the teaching force, leading many districts to make diversification a hiring goal. Because of the shortage of credentialed teachers of color, these districts may hire underqualified candidates to better match the demographics of their student bodies.

Figure 3-9
California Student and Teacher Ethnicity, 1997-98



Source: CDE (1998).[9]

Santa Monica-Malibu Unified School District, for example, typically has thousands of applicants for open teaching positions. However, the current teaching force and credentialed applicant pool are primarily white. As part of their commitment to fostering greater diversity and equity in all areas, the district encourages (but does not require) schools to hire people of color on emergency credentials. As in Selma, these hires tend to be people who are known to the district. Similarly, San Francisco Unified School District tries to hire a diverse teaching force and will hire people of color on emergency credentials to achieve this goal. The district's goal is to reduce the percentage of emergency credentials in the district (currently about 7%), but district

staff acknowledge that they may never eliminate them completely because doing so would run contrary to their goal of diversification.

From the district perspective, the flexibility to hire a small number of promising candidates before they are lured away to another district is a useful tool in a tight labor market. The drawbacks are that such hires often require additional support that the school may not have the capacity to provide. Taking a teaching job brings immediate income, but also an overwhelming challenge. From the student's perspective, hiring an underqualified teacher means the difference between having a trained teacher and having an untrained teacher for a full year. Although the district may benefit from this type of strategic hiring in the long run, students suffer in the short run.

Teachers Who Fill Shortage Areas

Many underqualified teachers are hired as a result of shortages of credentialed teachers in certain subject areas. As has been the case for decades, teachers in certain areas—such as bilingual education, special education, science, and mathematics—continue to be in especially short supply.

According to district-predicted hirings for 1998-99, the largest area of reported need is in self-contained classrooms,[10] driven primarily by the demands of the K-3 class size reduction program. Table 3-1 lists the number of teachers that districts expected to hire in each subject and special area for 1998-99.

Table 3-1
Estimated Number of Teacher Hires:
Areas with Highest Need (1998-99)

Teaching Area	Number of Predicted Hires	Percent of All Expected Hires
Self-contained	7,843	38
Bilingual education	3,175	15
Special education	2,858	14
Mathematics	1,133	6
English/drama	1,149	6
Life science	810	4
Social science	722	4
Physical science	618	3
Foreign language	522	3

Source: CDE (April 1998).[11]

Special Education Teachers. In 1997-98, nearly 8,000 emergency permits and waivers were issued to education specialists and resource specialists—leaving over one-third of special education staff in these categories without proper credentials.[12]

In 1997, the CTC adopted regulations that changed the requirements for special education credentials, in part as a response to the shortage of special education teachers. The new requirements, which teacher preparation programs are currently phasing in, provide more flexibility for special education teachers coming from out of state. They also eliminate the requirement that special education teachers first earn a multiple- or single-subject credential before earning a special education credential. Instead, general education and special education coursework is now integrated into a single credential program. The changes also allow for more flexibility in assigning teachers to teach students with different types of disabilities in a range of instructional settings (e.g., special day classes, special schools, resource rooms). However, given the large number of special education teachers without proper credentials, it remains to be seen whether these steps will be adequate to address the need.

Bilingual Teachers. Despite the passage of Proposition 227, many districts maintain classrooms in which teachers need a Bilingual Crosscultural, Language, and Academic Development credential. As Table 3-1 shows, 15% of districts' anticipated new hires for 1998-99 were for teachers with bilingual credentials.

The San Diego Unified School District case is illustrative of the bilingual education and special education teacher shortage. The district is able to hire a fully credentialed teacher for every regular K-6 classroom and enjoys a lower overall percentage of underqualified teachers than the state average. However, the district struggles to find credentialed bilingual and special education teachers and is forced to hire underqualified candidates for these positions. San Diego has roughly 400 teachers with emergency permits, about 90% of whom are in bilingual and special education classrooms. In addition, about 60 out of the 88 teachers in the district's internship programs are in the bilingual internship program.

Teachers of Math, Science, and Other Subject Areas with Shortages. Traditionally, mathematics and science have been recognized as subject areas lacking sufficient numbers of teachers. Math and science are the subjects with the largest numbers of single-subject emergency permit holders. According to the California Department of Education, in 1997-98, approximately 22% of all single-subject emergency permits and waivers were issued in the area of science, and 21% were in mathematics.[13] Disaggregated data indicate that almost all counties in the state request science and math emergency permits.[14] Table 3-1 shows that 13% of the anticipated new hires for 1998-99 were math and science teachers.

Many districts also experience difficulty recruiting secondary-level teachers of English, social studies, and physical education—subjects that are not typically recognized as shortage areas. In 1997-98, approximately 15% of all single-subject emergency permits and waivers issued were in the area of English, 10% were in social science, and 10% were in physical education.[15]

Another result of subject area shortages at the secondary level are teachers who teach "out of field," that is, do not hold degrees in the subject area they teach. Some of these teachers, however, have demonstrated subject matter competency in the process of obtaining single-subject credentials, either by completing coursework or by passing appropriate tests. These people hold valid credentials for their teaching assignment despite not having a degree in their subject area.

Other teachers are certified to teach in one subject area but teach additional or different subjects out of their field because of shortages at their school. These teachers do not have degrees in the subject they are teaching nor have they demonstrated subject matter competency. Technically, teachers should hold an emergency credential for any class in any subject in which they have not proven subject matter competency. It is believed, however, that schools widely underreport the practice of credentialed teachers' teaching out of field, making it very difficult to approximate the scope of the problem.[16]

SRI survey results show that 40% of all single-subject teachers do not have a major or minor in the subject area of their main teaching assignment. This number includes credentialed teachers who have demonstrated subject matter competency and those who have not, as well as teachers holding emergency permits.

Filling Classrooms

For many districts, the only type of underqualified teachers hired hold many promising characteristics. However, for some districts—or at least for some schools in those districts—the need to simply fill classrooms is the main reason for hiring large numbers of underqualified teachers. At the beginning of this chapter, we described 20% of California's schools as having 20% or more underqualified teachers. In these schools, large numbers of underqualified teachers typically have been hired because administrators can find few qualified teachers to fill any open positions. It is in these schools that students encounter the most serious hurdles to student learning.

LAUSD illustrates how the problem of hiring underqualified teachers to fill classrooms can escalate uncontrollably. The district has faced teacher shortages for many years, but in recent years the number of underqualified teachers has grown dramatically. As shown in Table 3-2, one-quarter of all LAUSD faculty are currently working on an emergency permit, waiver, or intern credential. More alarming, however, are figures for new hires. Table 3-3 shows that 75% of new teachers hired for the 1998-99 school year did not have regular teaching credentials.

Table 3-2
Qualifications of LAUSD Teachers, 1994-1998

	Preliminary or Professional Clear Credential	Emergency Permit, Waiver, or Internship Credential
1994-95	88%	12%
1995-96	88%	12%
1996-97	83%	17%
1997-98	79%	21%
1998-99	75%	25%

Source: Los Angeles Unified School District (1999).

Table 3-3
Qualifications of First-Year LAUSD Teachers, 1994-1998
(Includes New Hires Only)

	Preliminary or Professional Clear Credential	Emergency Permit, Waiver, or Internship Credential
1994-95	40%	60%
1995-96	47%	53%
1996-97	31%	69%
1997-98	26%	74%
1998-99	25%	75%

Source: Los Angeles Unified School District (1999).

Issues in Understanding the Different Types of Underqualified Teachers

Not all underqualified teachers are the same. Some teachers may be effective without having gone through a full teacher preparation program, but we have no data to suggest that these are not simply rare exceptions. Many teachers are filling shortage areas—like special education—where the skills needed for the job and the working conditions are such that current compensation formulas cannot attract sufficient numbers of qualified candidates. In these cases, students are likely to suffer. Other teachers are seen as quite promising or as filling specific district criteria. In these cases, schools and districts often express gratitude at being able to have hired them. But again, the end result is some period of time when students are being taught by a less than fully trained teacher. It is especially problematic that districts are seeking to hire young ethnic minority candidates before they have completed their degrees—putting these individuals in the difficult situation of teaching full-time while continuing their education.

In almost all cases, then, individual students and classrooms are likely to be negatively affected by having underqualified teachers. We showed earlier in this chapter that schools with more fully credentialed teachers have higher test scores. Another study has shown that even after controlling for the poverty level of the students, the qualifications of math teachers in a school significantly predict schoolwide test scores in math.[17] Our case studies showed that the detrimental impact on school culture and student learning is more dramatic in schools where there are large numbers of underqualified teachers. We turn to this issue next.

The Impact of High Concentrations of Underqualified Teachers

Case studies show that having a high percentage of underqualified teachers in a given school can create problems throughout the entire school community. The lack of qualified teachers becomes the primary personnel issue, year after year. Desperate to fill classrooms, these schools must hire from pools of untrained applicants. Often, these are the very schools suffering from overcrowding and the difficult working conditions that follow.* The lack of mentors, overcrowded buildings, year-round schedules, and assignments to the most challenging classes all conspire against even the most well-meaning emergency-credentialed teacher. Many new teachers in these schools leave after a short time, opening up slots that inevitably must be filled with more underqualified teachers. The stability and reputation of the schools suffer, making it even more difficult to attract qualified teachers and making schools unable to pull themselves out of their hiring crisis.

In addition to exacerbating poor teacher retention rates, high concentrations of underqualified teachers can erode professional development for the entire faculty. Resources for professional development are necessarily redirected to the underprepared teachers, and credentialed teachers have fewer professional development resources available to them. In addition, high concentrations of emergency permit teachers quickly exhaust the pool of potential mentor teachers. As more positions are filled by untrained teachers, the overall level of professional expertise in the school drops too low to move the school in a positive direction. Survey findings, discussed more extensively in a later section, show that teachers in schools with many underqualified teachers (21% or more) collaborate less than their counterparts in schools with few underqualified teachers.

In addition to depleting a school's capacity to provide professional development, high concentrations of underqualified teachers can damage the working environment simply by eroding teachers' sense of professionalism. As one credentialed teacher said, "It's an embarrassment that anyone can walk in and get a teaching job. The lack of professionalism blows my mind. The discrepancy between trained and untrained teachers is huge." In addition, teachers point out, having students that were previously taught by untrained teachers makes the instructional aspect of their job more difficult. As another veteran teacher said, "We all pay for it if an emergency teacher flounders all year."

Of course, the most distressing aspect of high percentages of underqualified teachers is the negative impact on students. Veteran teachers in such schools are frank about what they see in

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* Working conditions in overcrowded schools and their impacts on professional learning communities are discussed more extensively in Chapter 6.

the classrooms of their underqualified colleagues. One teacher at an LAUSD middle school with more than 25% underqualified teachers said, "On a scale of 1 to 10, new [underqualified] teachers are doing a 1.5. They come with no experience. They're bombing." Another teacher from the same school reported that an outsider would be shocked by a visit to the classrooms of many of the underqualified teachers. "They just aren't doing anything in those classrooms."

In some schools, the shortages are so severe that classes are staffed by a revolving door of long-term substitutes. For example, one middle school math teacher in a year-round school reported serving as a substitute during off-track time because the school was unable to fill a position. By the time this teacher offered to fill in for the month, the class had been staffed by 17 different teachers.

INSIDE PERSPECTIVE

Fifteen percent of the teachers at Jones High School lack appropriate credentials. The school has a hard time attracting and keeping new teachers. For example, last year the school hired 5 new science teachers for a department of about 25, and not even half of the department has been there for over 5 years. In the math department, two or three positions remain unfilled. As one veteran teacher on the hiring committee reported, "Almost all applicants do not have teaching experience, and those who do have experience raise suspicion, like 'Why is this person transferring after 10 years experience?' Basically, we interview people and try to decide which one is most likely to survive...the district has to take what it can get to fill teaching positions."

Teachers also report that the professional culture and working conditions are lacking. "Teachers at this high school rarely talk about teaching, and neither does the administration. ...I can't recall the last time the science department sat down and discussed practices or what we're teaching."

The impact on student achievement is devastating. As one teacher reported, "There is some learning going on, but a combination of things contribute to low student achievement. There are many inexperienced teachers who don't know how to present material in a way that will cause learning to happen. Many have had to develop strategies just to survive in the classroom, some of which are probably harmful to learning. ... There's also a lack of motivation on kids' part. ... It is really hard to get some kids to do homework. I see a few reasons for this. One, when you have a bad teacher, you're not motivated to do anything. Also a lack of basic skills in reading and math really hurts kids in other subjects. ... I used to feel like things were improving, but I'm more cynical now. Unless something drastic happens, nothing will change. Every year, I say it can't get worse, but then it does."

Reasons Why Schools and Districts Have High Numbers of Underqualified Teachers

Concentrations of underqualified teachers can result from many factors that vary from district to district. One of the primary reasons is that many hard-to-staff schools have terrible working conditions where no well-qualified professional would want to work. As discussed more extensively in Part II, overcrowding, lack of adequate facilities and space, and weak or nonexistent professional support create extremely difficult and undesirable workplaces. Because they are in high demand, qualified teachers go elsewhere. Schools find themselves with many open positions to fill and few qualified applicants to choose from.

In addition to the problem of working conditions, the difficulty of these jobs is rarely reflected in the salaries offered to teachers who fill them. As shown in Table 3-4, when asked why they chose the district they work in, nearly half of teachers name pay scale and benefits as the most, second most, or third most important reason. Teachers in high-poverty, high-minority districts name it as an important reason even more often. Districts—especially those with poor working conditions—must compete not only with neighboring districts but with other professions for the teachers they want.

Table 3-4
Reasons Teachers Choose the District They Teach In

	Percent of Teachers Ranking Reason as Most, 2nd Most, or 3rd Most Important
How close to home	59
Pay scale/benefits	48
Assignment available	40
Previous experience with district	33
Positive reputation of district	33
Support for new teachers	30
Challenge of particular assignment	16
Safety of school/community	11

Source: SRI statewide teacher survey.

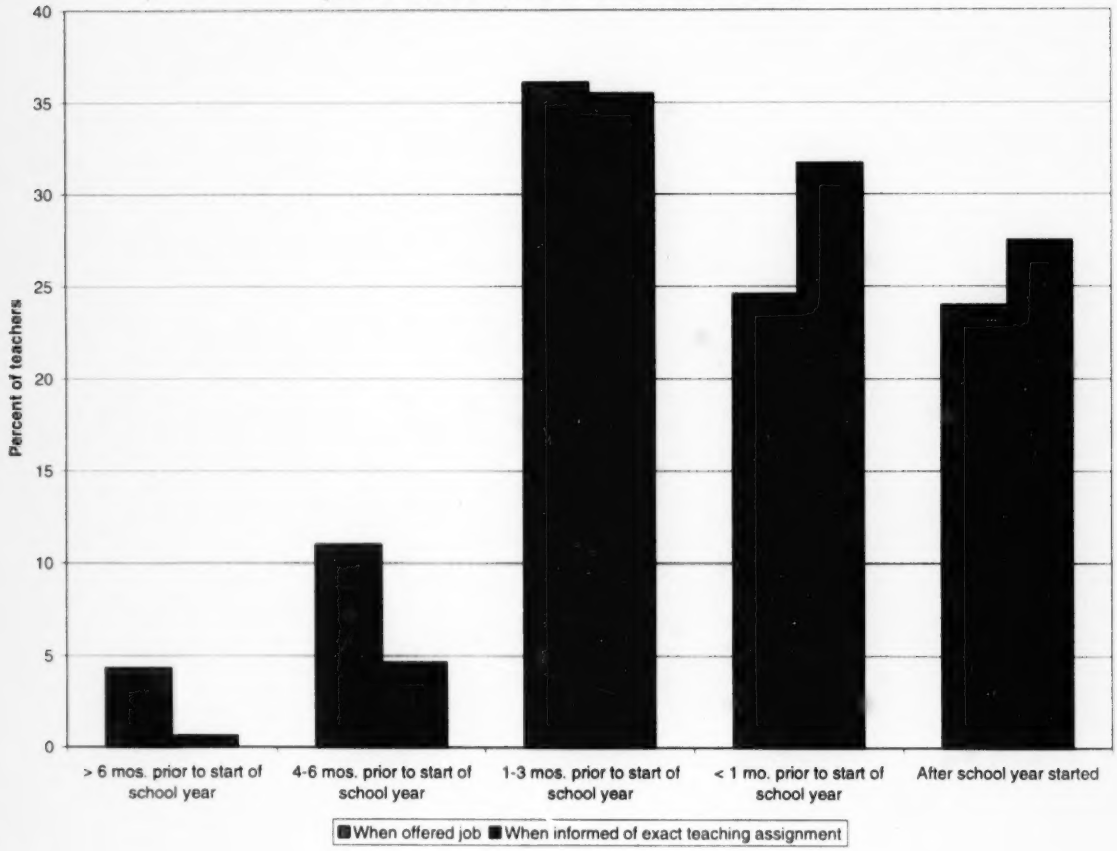
Related to working conditions is the location of a school—many schools with large proportions of underqualified teachers are located in areas considered undesirable to teachers. California does not have one large labor market for teachers; instead, there are multiple regional labor markets. When teachers are asked why they chose the district they currently work in, a

majority report that proximity to home is an important reason, as shown in Table 3-4. This result is consistent with previous findings that show that teachers choose schools close to their current homes and that a majority limit their job search to a 25-mile radius.[18] These findings imply that teachers are generally not willing to relocate or commute great distances to take a teaching job. Typically, a qualified teacher living in Humboldt County is not going to pack up and move to Compton, even if he or she were hired early and paid slightly more than in a position in her local district.

A second aspect of location is the particular neighborhood a school is located in. Although we know that teachers generally limit their job search in terms of area, these findings do not imply that teachers will take *any* job that is near their home. Within a local market, schools may be competing with nearby schools that are in more affluent areas and perceived as safer or "nicer."

A third reason why schools or districts may have a high number of underqualified teachers is that they do an inadequate job of recruiting and hiring teachers. As Figure 3-10 shows, many teachers are hired and given their teaching assignments very late. One-quarter of California teachers hired in the past 5 years were offered their job less than 1 month before the start of the school year. Nearly another quarter were offered their teaching job after the school year had already started. Figure 3-10 also shows that teachers are, on average, not informed of their exact teaching assignment for some time after they are hired. Because teaching assignment is a key factor in teachers' employment decisions, this fact further handicaps "late" districts.

Figure 3-10
When Teachers Are Hired and Informed of Exact Teaching Assignment
(Of Teachers Hired in the Past 5 Years)



Source: SRI statewide teacher survey.

Some district officials complain that they hire late because they are not sure of their budgets until the state passes its budget. More frequently, districts are slow to hire because of requirements that experienced teachers get first choice of open positions. In large districts, clumsy central office bureaucracy and an ambiguous division of recruiting and hiring responsibilities between schools and the central office can result in slow hiring.

In San Diego, as in many districts, the union contract requires that job openings be posted and that teachers with seniority be given an opportunity to bid on them. If a senior teacher takes a new position and vacates the old one, that job must be posted. The resulting chain reaction can cause late openings.

In LAUSD, several factors combine to create a tangled, inefficient hiring process. The district must abide by the Rodriguez court decree, which attempts to equalize funding across the district. According to the decree, schools that have many experienced teachers must hire a less expensive beginning teacher if a vacancy opens. Large schools with many beginning teachers are supposed to have priority for those experienced teachers who are looking for jobs. (In reality, there often are no experienced teachers who apply for such positions, and the district must hire emergency teachers for these openings.) Another mandatory hiring consideration is whether the applicant is minority or nonminority and how the person's employment will affect the ethnic distribution of a particular school's staff. The district also must take into account whether another teacher has priority for a vacancy, according to the union agreement. By all teacher accounts, the amount of "red tape" generated by the hiring process makes the entire process impersonal, unpleasant, and full of roadblocks. Although clearly not the sole source of the teacher shortages in the district, the cumbersome hiring procedures do not help.

Interestingly, the timing of teacher hiring overall shows no relationship to the poverty level of the school, the percentage of minority students in the school, or the number of emergency teachers in the school. This finding indicates that districts with high percentages of emergency teachers are not, on average, hiring later than other districts with low percentages of emergency teachers. However, reports from teachers indicate that districts may be doing an inadequate job of hiring relative to their particular hiring needs. In other words, districts that know they are likely to have many open positions *need* to recruit aggressively and hire early to have a chance of getting qualified teachers. More desirable districts can afford to hire later and still manage to fill their positions with credentialed teachers.

Of course, for any given school or district, it is unlikely that there is one reason to explain a high concentration of underqualified teachers. In reality, it is likely that more than one factor is operating, clouding the question of who or what is responsible for the problem. One thing that is clear is that to attract good, well-qualified teachers, schools must offer an attractive package of nearly all of the following: good working conditions, good salaries, a smooth hiring process, and a desirable location. Schools lacking a desirable location, in particular, need other ways to be attractive. Below we discuss what districts can do to make themselves more attractive to teachers and reduce the number of underqualified teachers. Next, we discuss those problems that are bigger than the district unit and beyond the district's scope of control.

What Districts Can Do to Reduce the Number of Underqualified Teachers

Districts can and do take action to improve their recruitment and hiring practices in an effort to reduce the number of underqualified teachers. Whereas many districts suffer severe shortages of teachers year after year, some—with similar demographics—succeed in attracting credentialed teachers. Proactive districts' actions range from offering financial incentives to building "pipelines" into the districts with preparation programs to more aggressive recruitment combined with a streamlined hiring process. In this section, we describe effective district recruitment and hiring strategies, as well as some of the challenges and constraints districts face in implementing them.

Financial Incentives for Teachers

Districts can offer various financial incentives to compete with neighboring districts for new teachers. El Centro and Selma are both semirural districts that offer comparatively high pay scales and are able to attract and hold qualified teachers. Selma purposefully has designed its pay scale to be high for the first few years and plateau somewhat in subsequent years. The district believes that once teachers begin working in the district, they are likely to stay. Signing bonuses are another variation on this strategy. Anticipating shortages, Elk Grove offered $2,500 signing bonuses to attract new teachers in 1999. In addition, many districts try to attract experienced teachers by offering full salary credit for most or all years of previous experience outside of the receiving district. LAUSD now accepts up to 12 years of outside-district experience on the district's pay scale; Elk Grove accepts 10 years of experience.

As we discussed earlier, teachers report that salaries are one consideration in their selection of a teaching position. Unfortunately, our research does not indicate what level of salary would be sufficient to attract qualified teachers to hard-to-staff schools. However, it is clear from our case studies that, at the very least, a combination of financial incentives and dramatically improved working conditions is required to address the crisis.

Strategic Partnerships with Universities

Some districts foster close partnerships with universities to help create a pipeline of new teachers into their schools. One example of a formal approach is Santa Monica-Malibu Unified School District's partnership with UCLA's Center X. This partnership places Center X students in Santa Monica schools and, in turn, helps the district work toward its goal of diversifying its teaching staff. Informal efforts in Selma include fostering strong personal connections with local IHE faculty to get names of promising candidates and approach them directly. In LAUSD and

other districts, principals actively seek student teachers to work in their schools, in order to have a good chance to hire them.

District-Based Preparation Programs

The number of district-based preparation programs is growing, in part, because these programs are tailored to district needs and serve as pipelines into the district's schools. Elk Grove's Teacher Education Institute (TEI) graduates about 80 teachers each year and places most of them in district schools. San Francisco also has a district-based preparation program and is expanding the program during the 1999-2000 school year. In addition, district internship programs are growing in response to the need to hire underqualified teachers. District officials see these programs as effective ways to deal with shortages and build a cadre of teachers likely to stay in their district. All 1,100 participants in LAUSD's District Intern program teach full-time while they are enrolled in the program. These district interns can earn a teaching credential after 2 years without having to pay tuition.

Aggressive Recruitment

One of the ways districts have successfully increased the flow of new teachers into their schools is through aggressive recruitment efforts. Our survey findings bear out the importance of formal and informal district recruitment efforts. Forty-one percent of teachers hired in the past 5 years say that the school district assisted them in finding their current job. Thirty-seven percent report that word of mouth served the same function. Districts like New Haven—which has a stellar reputation for attracting high-quality teachers—have pioneered the use of technology to conduct out-of-state interviews and receive resumes via e-mail, as well as sophisticated marketing and recruitment strategies that mirror those in the business world. Elk Grove has formed a district advisory committee for recruitment. Selma, a smaller district, has a targeted strategy of directly approaching candidates whom district staff have heard about through IHE faculty. In addition, Selma makes the most of routine job fairs by doing preliminary interviews on the spot and immediately following up with promising candidates.

Streamlined Hiring

Despite the problems of late state budgets and union contracts, some districts manage to make early hiring decisions and beat out competing districts for teachers. In Selma, for example, the district surveys its teachers in February to determine which jobs will be open the following year and which teachers want to change teaching assignments. Once open positions are identified, the district tries to fill them immediately. Typically, all jobs are filled by June, far ahead of neighboring districts that finish their hiring processes around August. Similarly, Elk

Grove completes its transfer phase by March and does a hiring round then and again in May, and then actively continues to offer contracts through October. San Diego has an aggressive out-of-state recruiting campaign and goes to several key college and job fairs annually. Given the large number of teachers it must hire each year and wanting to avoid hiring delays, the district offers hundreds of contracts in the spring, before knowing which particular schools have openings.

What Districts *Cannot* Do (Alone) to Reduce the Number of Underqualified Teachers

In Chapter 2, we discussed teacher supply in terms of people with credentials who are willing to take the jobs available, given the current working conditions and salaries offered. We distinguished between this pool of people, which is too small to fill all the teaching positions available, and the larger supply pool—that is, individuals who have credentials but are currently unwilling to take the available jobs. The district policies discussed above, though successful in the eyes of the district, are limited in their reach. Even if all districts implemented the strategies described above, they probably would not solve the statewide problem of too many underqualified teachers. In reality, these district policies probably are drawing a teacher from the smaller pool into one school rather than another, rather than drawing in a new person who would not otherwise be in the teaching workforce. Consequently, proactive districts that are successful in recruiting qualified teachers often do so at the expense of neighboring districts.

The El Centro School District illustrates how an attractive, proactive district can "cream" qualified teachers from the local labor pool. The town of El Centro is the largest in Imperial County and is considered a good place to live, especially compared with the surrounding communities. The schools have a good reputation for treating teachers professionally and paying them well. The fact that El Centro is able to attract and hold the best teachers in the Imperial Valley contributes to its strength and ultimately to its attractiveness. By contrast, the surrounding districts are weak and lose their best teachers almost immediately—a process that makes them less attractive to good teachers. The size of the local pool of teachers who are willing to take jobs at the salaries offered and in the conditions offered is limited. Thus, as Table 3-5 illustrates, El Centro is able to meet its hiring needs with qualified teachers, but nearly all the other districts in Imperial County are struggling to do the same. As the superintendent of the Imperial County district of Westmorland Union Elementary explained, "Our biggest challenge is retaining staff. It's very difficult for us to keep teachers, even though our pay scale is relatively high, and we give up to 12 years of credit. Nine teachers out of 25 on our staff are new, and this happens to us *every* year." This district, like El Centro, is trying to attract and retain teachers with the resources it has. However, its strategies are not as powerful as El Centro's, and they certainly are not powerful

enough to reach beyond the limited number of people willing to work under current conditions and salaries.

Table 3-5
Underqualified Teachers in Imperial County School Districts

District	Number of Schools	Average Percent Underqualified Teachers, 1997-98
Brawley Elementary	4	11
Brawley Union High	1	22
Calexico Unified	7	9
Calipatria Unified	4	23
Central Union High	2	14
El Centro Elementary	11	3
Heber Elementary	1	10
Holtville Unified	4	19
Imperial Unified	4	13
Magnolia Union Elementary	1	20
McCabe Union Elementary	1	0
Meadows Union Elementary	1	12
Mulberry Elementary	1	38
San Pasqual Valley Unified	3	27
Seeley Union Elementary	1	20
Westmorland Union Elementary	1	31

Sources: CBEDS (1999); SRI analysis.[19]

Even El Centro has difficulty recruiting and holding high school teachers, particularly in math and science. The primary reason is that teacher candidates must travel outside the Imperial Valley to do the coursework necessary for secondary specialties. This smaller pool of potential teachers are frequently lured away from El Centro to more lucrative and appealing positions in San Diego, for example. This is another example of the "creaming" effect, except that qualified teachers are siphoned in the opposite direction—away from El Centro, rather than toward it.

To avoid the process of merely shuffling around a too-small pool of teachers who are willing to take available jobs, California cannot simply produce more and more teachers without attention to working conditions and salaries. For years, the teacher preparation system has

produced many more credentialed teachers than the number that actually take jobs. We believe that, given current working conditions and salaries, the supply of candidates who are willing to take jobs will never match or exceed the number of jobs available. Therefore, strategies that do not reach deeper into the larger supply of teachers, all those in the state who hold a teaching credential, are ineffective for making significant changes beyond the district unit.

Instead, the production of teacher candidates must be coupled with efforts to improve the jobs they are expected to take and the compensation they are offered. Although districts—El Centro, for example—can work to toward this goal to some degree, as well as do their part to tighten recruitment and hiring efforts, they cannot bear the burden of fixing the state's teacher crisis. Districts' actions may in many cases aggravate the problem of too many underqualified teachers, but the problem is bigger and beyond the district unit. Districts—be they small or large, rural or urban—do not have the financial or human resources to fix working conditions enough or increase salaries enough to reach deeper into the larger supply of credentialed teachers. At best, they may siphon a few teachers away from another district.

Endnotes

[1] California Department of Education (CDE), Educational Demographics Unit. (1999). School-level teacher certification data compiled by special request. SRI analysis.

[2] Teacher data from CDE. (1999). Student achievement data from CDE (1998) STAR reports research files Sacramento, CA: Author. Retrieved in 1999 from the California Basic Educational Data System (CBEDS) databases on the World Wide Web: http://star.cde.ca.gov/star98/research_index.html. SRI analysis.

[3] CDE (1999). SRI analysis.

[4] CDE (1999). SRI analysis.

[5] CDE (1999). SRI analysis.

[6] CDE (1999). SRI analysis.

[7] CDE (1999). SRI analysis.

[8] CDE (1999). SRI analysis.

[9] CDE, Educational Demographics Unit. (1998). *Number of teachers in California schools by ethnic group, 1981-82 through 1997-98* and *Enrollment in California public schools by ethnic designation, 1981-82 through 1998-99.* Sacramento, CA: Author. Retrieved in 1999 from CBEDS demographics reports on the World Wide Web: http://www.cde.ca.gov/demographics/reports/.

[10] CDE, Educational Demographics Unit. (1998, April). *Teacher shortage and demand: School year 1997-98.* Sacramento, CA: Author. The total need reported by districts does not match our estimate of total teacher need. This is in part because districts are estimating future hires, rather than reporting actual numbers, and in part because we calculate the need for credentialed teachers only and therefore count all positions filled by emergency permit, waiver, and internship credential holders as unfilled.

[11] CDE (1998, April).

[12] Emergency permit data from Commission on Teacher Credentialing (CTC). (1999). *Totals of credentials granted fiscal year 1997/98.* Sacramento, CA: Author. Waiver data from CTC. (1998, August). *Analysis of approved credential waiver requests, 1997-98.* Sacramento, CA: Author. Total staff data from CDE, Educational Demographics Unit. (1998). *Course listing enrollment and staff in California public schools, October 1997.* Sacramento, CA: Author. Retrieved in 1999 from CBEDS demographics reports on the World Wide Web: http://www.cde.ca.gov/demographics/

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[17] Fetler, M. (1997, January). Where have all the teachers gone? in *Education Policy Analysis Archives 5*(2).

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CHAPTER 4. THE SYSTEM OF PREPARING QUALIFIED TEACHERS FOR EVERY CALIFORNIA CLASSROOM

CAPACITY

Does the teacher education system have the capacity to meet the demand for new teachers?

- In the past decade, the proportion of new teachers educated through the CSU and UC systems declined while the proportion from independent institutions increased. A majority of the increase is accounted for by two institutions: National and Chapman.
- Both CSU and UC are committed to addressing this issue and increasing their capacity to prepare more teachers. New state funds promise to boost the public system's production of new teachers.
- Yet few policy initiatives focus on ensuring that teaching candidates enter the workforce and that a sufficient number of teachers are being prepared to take and remain in jobs in the hardest-to-staff schools.

QUALITY

Do different approaches to teacher education result in better-prepared or less-well-prepared teachers?

- As a group, teachers generally feel well prepared to teach the subject matter in their classes. Underqualified teachers feel less well prepared.
- New teachers and administrators generally give their preparation programs moderate to negative ratings. No one sector (public or independent) is identified as producing stronger teacher candidates. A few extended programs, like UCLA's Center X, produce new teachers who are highly regarded by teachers and administrators.

ALTERNATIVE APPROACHES

What progress have we made with alternative approaches to teacher preparation?

- Institutions of higher education and districts are making efforts to develop and expand more flexible routes into the profession, including district-based preparation programs and internship programs.
- These programs, while showing promise, may be limited in terms of quantity and quality. District-based programs break down barriers between districts and IHEs, but they rely heavily on a finite pool of veteran teachers and are limited in capacity. Internship programs show promise for attracting and retaining desirable candidates, but historically they prepare only a small fraction of teachers and—by definition—place underqualified teachers in the classroom.
- Alternative approaches that place unprepared teachers in the classroom can create disincentives for teacher candidates to enter preparation programs before beginning to teach.
- The concentration of underqualified teachers in hard-to-staff schools has eliminated incentives for teacher candidates to become prepared to teach in these schools.

If every California schoolchild is to have a qualified and effective teacher, the state's teacher preparation system must produce a sufficient number of high-quality teaching candidates. In doing so, teacher educators face the core dilemma involved in solving the problem of underqualified teachers in an era of rising standards: how to increase the quantity of teaching candidates willing to accept jobs in the state while simultaneously increasing the quality and effectiveness of those teaching candidates.

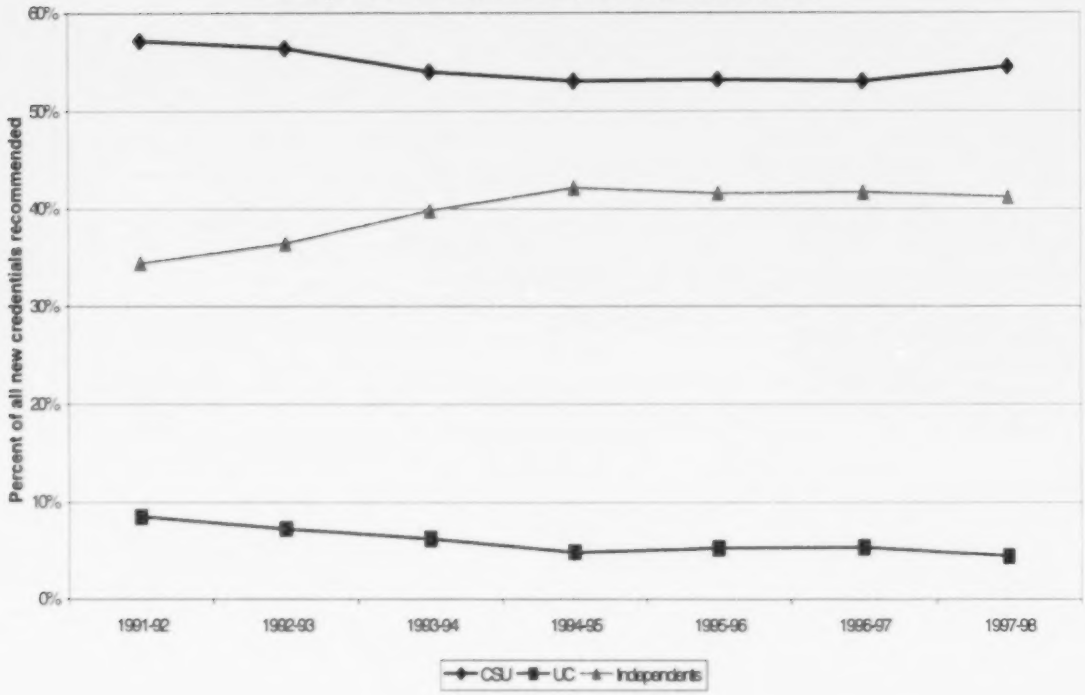
In this chapter, we assess California's progress in meeting this challenge. We ask two related questions: Does the state system of teacher preparation have the capacity to produce a sufficient number of new teachers to meet the demand in California classrooms? Is the system turning out teaching candidates capable of helping all students learn to high standards? As in previous chapters, we assess the prospects of emerging policies and trends for affecting the capacity of the teaching workforce in the long run.

The Capacity of the Teacher Preparation System

There is no formal "system" of teacher preparation in the state. Teachers are prepared through two separate public systems—the California State University (CSU) and University of California (UC) systems—and 43 independent institutions. The CSU system is charged by the state with major responsibility for teacher preparation, and CSU's programs on 22 different campuses have long produced the majority of new teacher candidates in the state. UC, which is charged primarily with carrying out relevant research on educational issues, produces a much smaller number through its eight-campus system.[1] The independent institutions produce the rest of the teaching force.

At the beginning of the 1990s, the CSU and UC systems in combination prepared two-thirds of the state's teacher candidates. By the end of the decade, their share of the total number of teachers trained in the state had dropped to 58%. In contrast, the proportion of teacher candidates prepared at independent institutions increased from 34% at the beginning of the decade to 41% by 1998 (see Figure 4-1).

Figure 4-1
Share of New Credentials Recommended by CSU, UC, and Independent Institutions, 1991-92 to 1997-98



Source: CTC (1998, 1999).[2]

CSU's Capacity to Produce New Teachers

CSU's declining share during this period resulted not from a lack of demand but rather from a lack of capacity—itself a result of policy decisions. CSU teacher education programs' space and faculty allotments have been limited by state budgetary considerations and internal resource allocation decisions. That is, the state budget did not provide additional funds to allow CSU to meet rising client demand, and CSU policy-makers chose not to reallocate available funds to the high-demand teacher preparation programs. As a result, CSU had to turn away qualified applicants. According to rough estimates by the deans of these programs, 1,000 qualified individuals were not admitted to CSU teacher preparation programs in 1997-98.

Since 1998, the state legislature and university leaders have tried to address the problem of diminished capacity in the public teacher preparation system. In 1998, a report from the CSU Presidents' Commission on Teacher Education acknowledged CSU's responsibility to "produce an increasing number of well-qualified teachers to staff California schools."[3] Following this

report, CSU trustees voted to revamp their teacher preparation program with the aim of increasing the number of students recommended for credentials by 25% by the year 2000.

CSU's commitment is supported by recent state budget additions. In 1997-98, the state budget provided CSU with an additional $5 million in Economic Improvement Initiative Funds to build capacity for preparing more teachers. CSU administrators directed campus presidents to use these new funds exclusively for multiple-subject programs and the coordination of K-12 collaborative partnership arrangements with schools, districts and subject matter departments. In 1998-99, the budget allocated $9.3 million to fund an additional 1,800 full-time students in CSU teacher preparation programs. In addition, the budget included $5 million in one-time funds to develop a distance learning teacher preparation program.

UC's Capacity to Produce New Teachers

As with CSU, the University of California's capacity is constrained by state budgetary and internal policy decisions. Tight state budgets through the early 1990s and the dictate of the Master Plan that UC not have teacher preparation as a primary mission have limited its ability to expand its programs. As a result, UC's share of new credentials recommended has been cut in half during the 1990s, and the absolute number of credential candidates has actually declined during this period. The UC leadership is aware of the situation and has committed itself to increasing the number of teachers the UC system prepares each year[4]—although UC's production of new teachers is likely to remain small, its programs play an important research and leadership role.

Growth of Independent Institutions' Capacity

Independent institutions, which are not constrained by state budgetary decisions, have been able to respond to the rising demand for teacher credential programs in the past decade. As tuition-driven programs, independent universities can expand as new candidates pay for the increased institutional capacity. The result has been an increase in the percentage and the numbers of teachers being prepared in private universities and colleges.

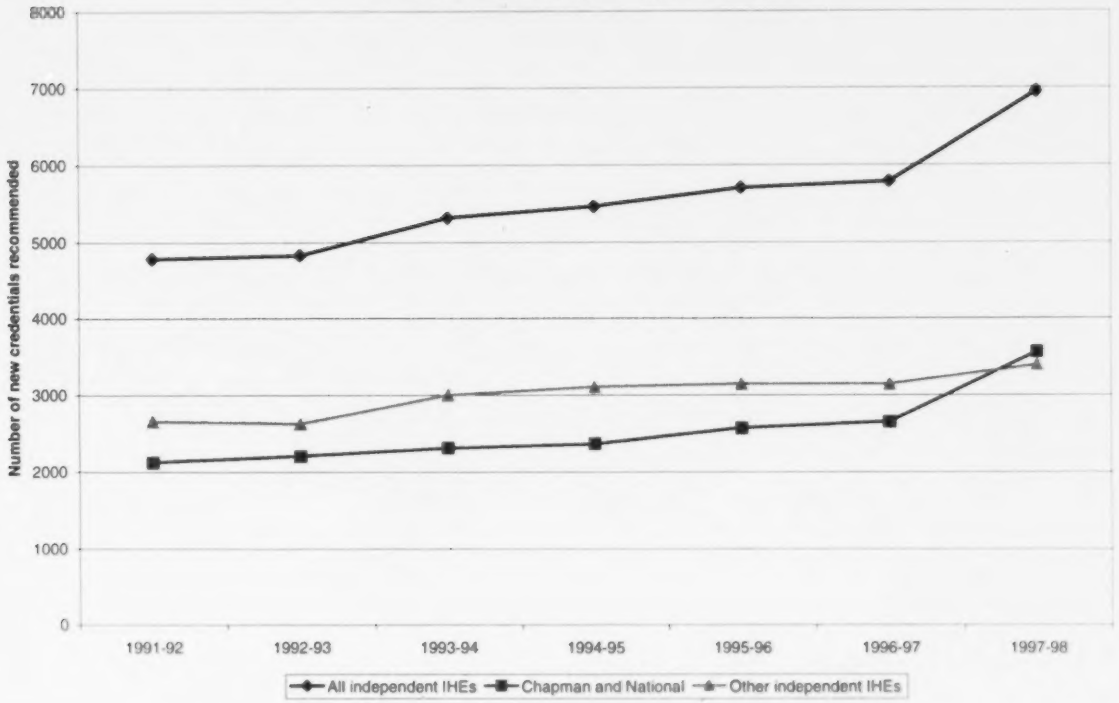
However, the growth in teacher candidates has been concentrated in a few independent institutions. Most independent schools have experienced slow growth, preferring to limit their capacity and focus on a relatively stable number of students. For example, Mills College in Oakland has graduated between 40 and 60 students per year throughout the decade. In fact, two schools—Chapman and National—account for the vast majority of the growth in teacher credentials issued by independent institutions. As shown in Figure 4-2, Chapman and National

together now produce more teacher candidates than the rest of the independent institutions combined.

The growth of the National and Chapman teacher education programs reportedly is the result of their responsiveness to the needs of career changers and emergency permit holders who work full-time while earning their credentials. Often, these types of teachers report that they could not have obtained a credential without choosing an independent institution. Although comparatively expensive, these independent programs are considered more "user friendly," offering classes at many locations at convenient times. In contrast, teacher candidates in programs at public institutions often report having a hard time getting the classes they want or being unable to transfer subject matter competency credits from other universities. One new teacher we spoke with who went through National's program noted, "It was the only way I could do it. I was working full-time doing construction and so I could only attend classes at night." Another informant described the local CSU program as "[h]olding regular business hours that do not work for teachers who must be in class all day."

Market-driven independent institutions clearly have an important role to play in meeting the demand for new teachers. In fact, the California Commission on Teacher Credentialing is evaluating teacher preparation programs at a number of out-of-state universities that have satellite campuses in California and that are not currently accredited by the Western Association of Schools and Colleges (WASC). The CTC will evaluate whether teacher preparation by these schools is adequate for California teacher certification. Accreditation of these schools probably would increase the number of flexible programs available to potential teachers.

Figure 4-2
Number of New Multiple- and Single-Subject Credentials Recommended by Independent IHEs



Source: CTC (1998, 1999).[5]

Issues in Understanding the Capacity of the Teacher Preparation System

In combination, the expansion of CSU's output of new teachers, UC's renewed commitment to teacher preparation, and the continued expansion of the market-driven independent sector—aided by the state—promise to increase the number of new teacher candidates in the next few years. Indeed, preliminary numbers show that the expansion has already started.

Yet, in considering the prospects for meeting the state's need for credentialed teachers, a few issues need to be considered. First, a central problem is not simply producing a sufficient number of teaching candidates but also ensuring that a high proportion actually take jobs. Large numbers of teaching candidates awarded credentials—somewhere between 30% and 50%—do not go into the teaching workforce.[6] Teacher preparation programs cannot control whether individual graduates accept employment, but certainly program leaders should be doing everything in their power to assist their graduates, they should be tracking how many of their

graduates successfully find jobs, and they should be developing policies to increase the percentage who take jobs. Currently, there are no statewide data available on these issues—and neither the CSU nor UC system tracks placement rates. Increasing the capacity of the teacher candidate pipeline without efforts to plug current leaks simply means continued loss of valuable state dollars that support teacher training.

Second, it is not clear that these developments will address the maldistribution of the teacher shortage. Will expanding the capacity of teacher preparation programs across the CSU campuses ensure that the areas in greatest need will get sufficient teaching candidates? Will facilitating the entrance of additional independent institutions address the needs of the hardest-to-staff schools? We expect that the answer to both questions is no, that policies designed to increase the overall capacity of the system, although necessary, will not be sufficient to ensure that students in the hardest-to-staff schools will have a qualified teacher. Without targeted efforts to produce more qualified teachers in geographic areas with high concentrations of these schools, the current maldistribution of underqualified teachers is likely to continue.

Finally, efforts to increase capacity always have to be balanced with efforts to ensure that expanded programs are of high quality. We turn to the issue of quality in the subsequent sections of this chapter.

The Quality of New Teachers

Regardless of absolute numbers, are California's teacher preparation programs producing candidates who become effective teachers? This study did not directly measure teacher effectiveness, nor did we directly assess the relative efficacy of different teacher preparation programs, or even of different models of teacher preparation. We did not directly observe teacher preparation classes, nor did we sample programs to be able to describe the full range of approaches. Data from both the case studies and surveys, however, do shed some light on the issue of teacher quality.

First, we look at teachers' perceptions of their preparedness to teach in their assigned classrooms. In response to the teacher survey, teachers generally report that they feel well prepared to teach (Tables 4-1 and 4-2). Self-contained classroom teachers report that they feel much better prepared to teach reading (and, to a lesser extent, mathematics) than science and computer/technology literacy. These tables also compare underqualified teachers—those on emergency and intern credentials—with fully credentialed teachers. In every case except computer/technology literacy, underqualified teachers report themselves to feel less well prepared than do credentialed teachers.

Table 4-1
Self-Contained Classroom Teachers' Preparation to Teach Core Subject Matter

Subject	Mean Score (Scale of 1-5; 1=not well prepared; 5=very well prepared)	
	Fully Credentialed Teachers	Underqualified Teachers
Reading/language arts	4.5	4.1*
Mathematics	4.3	4.0**
Social studies/history	4.1	3.7*
Science	3.6	3.1
Computer/technology literacy	3.0	3.2

Source: SRI statewide teacher survey, 1999.
* Contrasts on mean ratings significant at p<=0.05
** Contrasts on mean ratings significant at p<=0.01

Table 4-2 shows that fully credentialed single-subject teachers (those not in self-contained classrooms) report feeling better prepared to teach the subject matter in their main teaching assignment than their counterparts who hold emergency or intern credentials.

Table 4-2
Single-Subject Teachers' Reported Preparation to Teach the Subject Matter Covered in Their Teaching Assignment(s)

	Mean Score (Scale of 1-5; 1=not well prepared; 5=very well prepared)	
	Fully Credentialed Teachers	Underqualified Teachers
Main teaching assignment	4.7	4.3**
Secondary assignment	4.3	4.0

Source: SRI statewide teacher survey, 1999.
**Contrasts on mean ratings significant at p<=0.01

These findings are somewhat surprising. First, self-reported preparedness is higher than we would have expected. Second, the differences between underqualified and credentialed teachers are not as large as we expected, although they are generally statistically significant. Logically,

we would expect underqualified teachers to report being much less well prepared to teach than their credentialed counterparts. Our case study data suggest that those underqualified teachers in schools with high percentages of other underqualified teachers would be the least well prepared. It was in these schools that administrators reported having to hire "warm bodies" to fill the classroom. Unfortunately, the limited number of underqualified teachers in our survey database does not allow a direct test of this hypothesis.

Next, we turn to the question of the impact of preparation programs on teachers' perceived preparedness to teach. On the statewide teacher survey, new teachers generally gave their preparation programs moderate ratings when asked how well the programs prepared them to master the pedagogical skills drawn from the *California Standards for the Teaching Profession* (Table 4-3).

Table 4-3
How Well Credentialed Teachers Feel Their Preparation Program Helped Them to Increase Their Ability to Master Skills Described in the CSTP

CSTP Skill Areas	Mean Score (Scale of 1-5; 1=not at all; 5=a lot)
Planning instruction	3.7
Assessment	3.3
Creating effective environments	3.2
Understanding subject matter	3.1
Engaging all students	3.0
Engaging with families	2.8

Source: SRI statewide teacher survey, 1999.

New teachers in our case study schools held a somewhat more pessimistic view of their preparation programs. In general, the new teachers whom we interviewed believed that they should have had more direct exposure to real classrooms before they began teaching. Others felt a need for more experience with designing a coherent instructional plan and using curriculum materials effectively. Some voiced dismay over how little they got out of their preparation classes: "What I needed was more hands-on instruction. Why did I have to wait for the programs we have in our district…to really learn how to teach science and math?"

Most administrators we interviewed were equally critical of the programs that prepared teachers for their schools. Most agreed that newly credentialed teachers, along with underqualified teachers, were inadequately prepared to deal with the realities of full-time

teaching. Some were more specific: "They're not trained in critical-thinking processes, they can't move students from recall to the application and synthesis level." Others complained about new teachers' inability to teach reading and their lack of classroom management skills. No administrator felt that new teachers entered the classroom ready to teach.

Despite these concerns, some administrators noted that the impacts of even the best preparation programs are limited by their short duration. As one administrator explained: "What do I think of the teacher preparation program? Well not much, but really, realistically, I don't expect much. After all, they just have them [teacher candidates] for a year. What can you do in a year? I [at the district] have them for 30 years. So I feel the greater responsibility for their education and development."

At the same time, we found that teachers and administrators do not report significant differences in the effectiveness of teacher education programs sponsored by CSU, UC, or independents (although the survey did not differentiate among the different campuses of CSU and UC, nor among the many independents). In the survey, there were no statistically significant differences in new teachers' responses associated with the sector in which they received their credential. Administrators—in large part because of their perceptions of the limitations of preparation programs—generally did not see major differences in preparation across the different sectors. One central office personnel director noted, "We have had some bad ones from each of the local schools, and we have had some great ones from each."

Unfortunately, we were not able to survey teachers about their specific preparation programs to make program-by-program comparisons. However, we did find one extended program that received extremely high marks from teachers and administrators. Indeed, the only exception to the common negative perception of the quality of teacher preparation programs was the case of UCLA's Center X.* In the Los Angeles area, this 2-year program was praised for its ability to attract high-quality candidates and for its focus on significant clinical experience in local schools, combined with strong theoretical and subject matter training. Local administrators and teachers saw graduates of Center X as significantly better prepared than their peers from other institutions.

This study did not set out to examine the quality of teacher preparation programs in depth. We are struck by the generally moderate to negative perceptions of preparation programs by teachers and school administrators. With the exception of one UCLA center, no teacher preparation program was identified by teachers and administrators as especially superior to

* We do not mean to imply that UCLA's Center X is the only strong program in the state. It was simply the only one that showed up in our limited and not statistically representative sample of case study districts and schools.

others. And we found no relationship between the sector of the higher education community where a teacher was trained and perceptions of the quality of those programs.

These findings suggest again the importance of seeing "teacher learning" as an ongoing process, one that does not stop with the awarding of a credential. It also points to the continued need to focus on building the capacity of local districts to help teachers learn and to raze any barriers that remain between the expertise of university faculty and practicing teachers.

New Approaches to Preparing Classroom Teachers

In response to concerns about the quality of traditional programs and about the quantity of teachers needed to fill the state's classrooms, there have been a number of related developments. The state, through legislation, has developed a credentialing system that tries to reconceptualize teacher preparation as a career-long process. The state's "Learning to Teach Continuum" defines two levels of certification: a Level 1—or preliminary—credential is issued to individuals who have completed a basic teacher preparation program; a Level 2—or clear—credential requires participation in an individual induction program, formal assessment, and an individual growth program with 150 hours of professional development. Expansion of the Beginning Teacher Support and Assessment program and the new California Peer Assistance and Review Program are part of this system.

As we discuss later in this document, this new system is just being put in place, and its impact on teacher preparation is unknown at this point. In the meantime, there has been a growth in "alternative" approaches to traditional teacher education. By traditional programs we mean fifth-year programs that include university-based classes combined with a set schedule of supervised student teaching. Alternatives to this model vary from minimal modifications (e.g., holding classes in K-12 schools) to radical departures in which teachers are trained "on the job." Here we discuss these different approaches. We conclude by raising a number of issues about the long-term prospects for the teacher preparation system.

More Flexible Traditional Programs

The growth of independent institutions like National and Chapman are part of a broader trend as educators try to craft more flexible teacher preparation programs. In part, these efforts are designed to meet the needs of "alternative" teacher candidates—typically older, employed professionals. Hence, programs are holding night and weekend classes at more convenient locations.

The California State University system has committed itself to creating more flexible programs that will meet the needs of prospective teachers. The CSU Presidents' Commission on Teacher Education recognized that changes were necessary in order to fulfill this obligation. "If the CSU teacher preparation programs are to succeed in producing more teachers, they need to be more flexible, more entrepreneurial, more responsive, and more user friendly."[7] Planned changes include offering undergraduate coursework in education and fieldwork for prospective teachers and offering integrated programs, district partnerships, and 4-year and traditional fifth-year programs on campus and through distance learning. CSU has also launched a new credential program, CalStateTEACH, that will use the Internet, school site mentors, and site-visiting faculty supervisors to support the training of candidates from around the state.

District-Based Teacher Preparation Programs

Another development is the increased involvement of districts in creating their own teacher preparation programs. For example, at San Francisco State University, a co-principalship has been established with a San Francisco Unified School District principal and an SF State faculty member. Credential candidates work in K-5 classrooms in the morning and attend university classes in the afternoon at the school site. The program is scheduled to expand to other schools in the district in the 1999-2000 school year.

In LAUSD, the Accelerated Collaborative Training (ACT) program is a collaboration between the Polytechnic school family and CSU Northridge (CSUN), and is designed to fully prepare teacher candidates within 1 year. Unlike the vast majority of new teachers in the district who hold emergency permits, these candidates are full-time students. They spend the majority of the school day observing teachers in Polytechnic classrooms while taking courses in the afternoon and evening. Participating schools provide master teachers for ACT teacher candidates, and CSUN faculty teach courses at an on-site Professional Development Center located at Polytechnic High School.

School administrators are excited about the potential of the ACT program to place qualified teachers in desperately understaffed schools. As one principal explained, "With this program, teachers will know what they're getting into; they will have been trained in this cluster." However, the ACT program is producing only about 60 new teachers a year and must find candidates willing to forgo immediate employment opportunities in a district where most new teachers have not completed a preparation program.

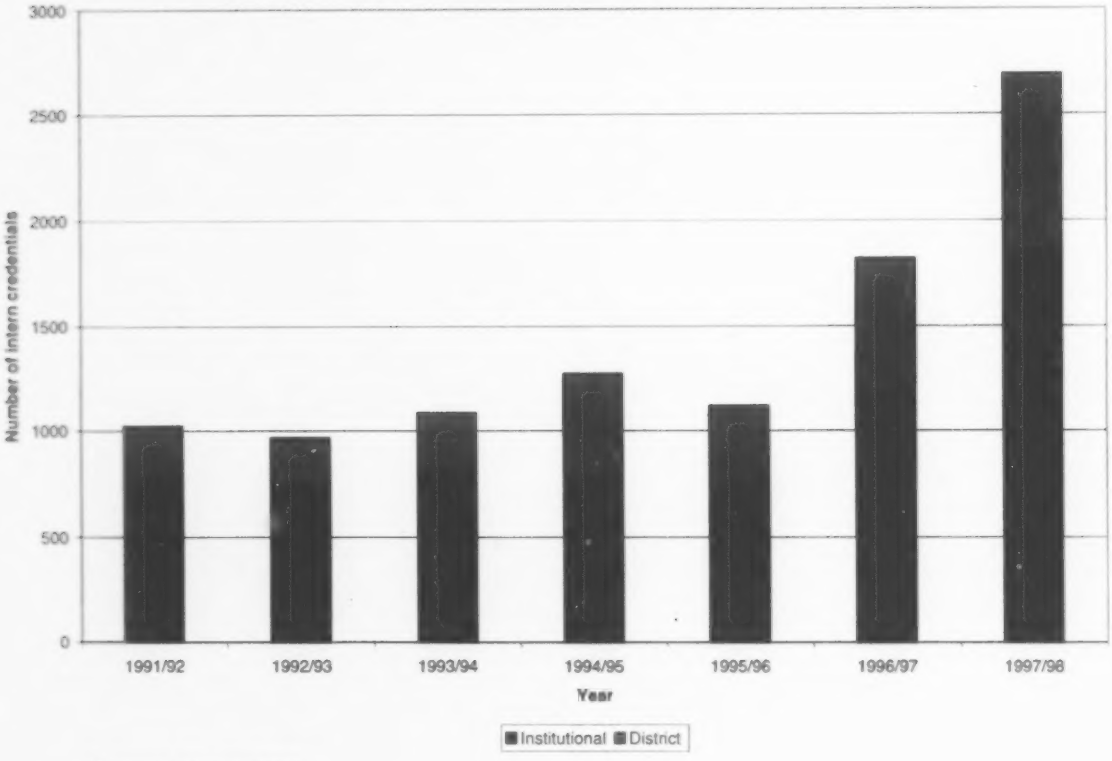
Internship Programs

Another response to the changing makeup of the teaching force is the development and expansion of internship programs. Internship programs are meant to offer an alternative certification route to those who enter the profession without completing a teaching credential but who have met certain requirements. While working as the teacher of record, interns are enrolled in a planned course of study and receive support from mentor teachers and/or IHE faculty. Individuals qualify for intern status if they have a baccalaureate degree and have passed the CBEST and subject matter requirements.

Figure 4-3 shows the growth in institutional and district intern programs from 1991 to 1998. The CTC issued a total of 2,689 new intern credentials in 1997, up from 1,820 in 1996 and 1,116 in 1995.[8] Because intern credentials are valid for 2 years, we estimate that there were 4,509 first- and second-year interns in 1997. Increased funding for internship programs indicates future growth, as well. Until 1997, state funding for all internship programs was $2 million per year. In 1997, $4.5 million was added for expansion to facilitate class size reduction and improve reading and math instruction in reduced classes taught by interns.[9] The 1998-99 budget raised the annual funding to $11 million, and preliminary estimates from the CTC show that the number of interns continues to grow.

Internship programs hold promise for a number of reasons. They provide a subset of new teachers holding emergency permits with support and a coherent academic program leading to a full credential. Second, the programs are designed to increase the supply of teachers and reduce the attrition of teachers with emergency permits. Although we do not have data on the percentage of interns who actually finish their program, high percentages of graduating interns do remain in teaching after graduation—and usually in the same school district where they pursued their internship.[10]

Figure 4-3
Institutional and District Intern Credentials, 1991-92 to 1997-98



Source: CTC (1999).

Finally, internship programs are expected to attract candidates who already live in the communities in which teachers are in demand. Existing data suggest that these interns are more likely to reflect the ethnic makeup of the student body. The CTC reports that almost half (48%) of the interns in funded district and university internship programs are members of ethnic groups currently underrepresented in California's teaching workforce. Some districts use their internship programs explicitly to attract more individuals from underrepresented groups. For example, San Francisco's district internship program is targeted particularly toward increasing the diversity of its teaching staff: 95% of participants are minorities.

Although internships offer some promise, there are questions about the limits of the ability of internship programs to address the teacher shortage—in terms of both quantity and quality. Historically, internship programs have prepared only a small fraction of new teachers, and, although this figure is growing, it still remains small. Regardless of how well internships prepare new teachers, they—by definition—place underqualified teachers into classrooms.

Although internship programs might train emergency teachers quite ably within a year or two, for the duration of the internship, the students in their classrooms are taught by someone who is learning the craft as he or she goes.

LOS ANGELES UNIFIED SCHOOL DISTRICT INTERN PROGRAM

LAUSD's District Intern (DI) program illustrates both the strengths and limitations of the internship model. The DI program is the largest (currently 1,100 first-year and second-year interns) and longest running (since 1984) in the state. The DI program is 2 years in duration, and teachers are grouped in cohorts of 20 to 30, according to grade level or subject area. The program is a planned course of study in 6-week modules, meeting once every week, and covering topics such as classroom management, literacy, authentic assessment, math and science, and cultural diversity. A summer project includes networking, community connections, field trips (to local resources), and corresponding write-ups. The second year covers the specialty areas: art, music, PE, special needs. District administrators and experienced teachers conduct all evening classes.

The district considers the District Intern program to be one of its strongest recruiting tools. Reportedly, teacher candidates are attracted to the program because of its price tag (tuition free), its cohort grouping, and its instruction in classroom management and teaching practices.

Equally important, retention rates among graduates of the program are very high, with 87.5% of the participants remaining in the district after 5 years. Attrition rates among all who enter the program are not known, but anecdotal evidence suggests a high drop out rate during the program. Still, local administrators report very positive experiences in hiring district interns: of all the underqualified teachers they deal with, the district interns are the most able to cope with the realities of teaching. A middle school principal enthused, "The DI program is outstanding. They really do their homework, they get BTSA [on-the-job] training, there's an emphasis on literacy. I would hire a DI anytime."

Although the DI program is quite successful in recruiting and retaining good teachers, it may not be a long-term solution to LAUSD's teacher shortage problems. The DI program accounted for only 11.7% of the new hires in 1998-99, compared with 62.3% of new hires who were not enrolled in any kind of internship or preparation program. Moreover, the DI program still places underqualified teachers in charge of classrooms.

Ironically, the DI program creates a disincentive for prospective teachers to receive training before they begin teaching. The district recruits directly out of undergraduate programs on university campuses, even while maintaining that teacher candidates who go through the traditional IHE program would be preferable to interns.

Pre-internship Programs

Introduced in 1998, pre-internship programs aim to provide continuous support to move emergency permit teachers toward entrance into a teacher preparation or intern program. Pre-internship programs are distinct from internship programs in that they serve emergency-credentialed teachers who are not yet enrolled in a teacher preparation program and who have not demonstrated subject matter competence. Pre-intern support includes both training in basic teaching skills and help in meeting the requirements for entrance to an internship program.

In 1997-98, an initial $2 million in grants was made available to school districts, county offices of education, institutions of higher education, and other professional organizations to help emergency-waiver holders to become fully credentialed teachers. Beginning in 1998-99, the state's annual budget provides $11.8 million to serve 4,000 teachers with emergency permits. To date, there are no data on how many pre-interns actually complete their subject matter requirements, move into intern programs, and ultimately receive a preliminary or professional clear credential.

Prospects for the Teacher Preparation System

It is still too early to assess the impact of the many new developments in teacher preparation in California. For example, many of CSU's initiatives, such as its "blended" 4-year programs and the new CalStateTEACH initiative, are just beginning. For other developments, like the growth of more flexible programs, no data are available to assess their relative efficacy. But what we know about these programs does raise some issues. The first relates to the capacity of the system to support "alternative" approaches. The second has to do with the potential quality of those programs.

The System's Capacity to Support Alternative Programs

District-based preparation programs, internships programs, and pre-internship programs all shift some of the "preparation" responsibility from traditional programs located in higher education institutions to local district and school personnel. These shifts are occurring on top of the extensive use of local veteran teachers and district administrators as instructors in the growing independent preparation programs like Chapman and National, as well as in public preparation programs.

There are some clear advantages to this trend: it serves to break down the barrier between higher education and K-12 and creates the possibility of tapping the most talented professionals from both sectors to help prepare teachers. For example, San Diego State University's satellite

campus at Calexico enlists practicing exemplary teachers from surrounding districts to teach methods courses. The practice bolsters the tiny full-time staff at the university and helps make methods classes more practical and relevant. In the case of El Centro Unified School District, skilled mentor teachers serve as adjunct faculty, and, simultaneously, the SDSU faculty are increasingly involved in the large progressive reform efforts undertaken by the district.

Yet the increased involvement of districts and district staff in teacher preparation raises a capacity issue. Whether by formal arrangement, such as Elk Grove's TEI, or by individual arrangements between K-12 staff and teacher preparation institutions, district participation in teacher preparation typically relies on the willingness of individuals to take on added responsibilities. In districts hardest hit by the teacher shortage, the influx of state dollars for internships and pre-internships does not translate directly into making available a sufficient number of veteran teachers to serve as mentors and instructors. And, of course, it is not just a matter of numbers, it is also a matter of match: as one district intern who taught high school English reported, "The mentor they assigned to me was a math teacher from a school 20 miles away. I never saw him."

Quantity and Speed at the Expense of Quality?

The demand for new teachers from districts seeking to fill classrooms and the apparent increase in older and currently employed individuals to enter the profession has motivated many teacher preparation programs to alter their traditional approaches. The result has been efforts to streamline programs and to offer more on-the-job training. These efforts are justified as reasonable responses to a crisis situation—and indeed they do hold some promise for increasing the number of credentialed teaching candidates.

Yet research suggests that more extended preparation programs with significant clinical experience produce higher-quality teachers. Not only do graduates of extended programs feel better prepared, but they enter the profession and stay in the profession at higher rates than graduates of shorter preparation programs.[11] In addition, research has established, at least in terms of mathematics education, the connection between more college-level content courses, certification in the discipline taught, and effective teaching.[12]

Although we do not have data from this study to assess the degree to which such research accurately reflects the current situation in California, these findings raise questions about the direction in which many teacher preparation programs are heading. Of particular concern is the trend in areas of high demand for fewer teacher candidates to participate in traditional fifth-year programs with student teaching components. Instead, candidates are increasingly choosing to

take teaching jobs before earning a credential. For prospective teachers willing to work in districts with severe shortages, there are virtually no incentives to enter a credential program. For example, of the 292 multiple and single subject teacher candidates at Cal State LA participating in their clinical experience during spring 1999, only 33 were not already full-time teachers of record.[13]

In effect, California has multiple systems of teacher preparation. On one end of the spectrum, California can boast of a handful of intensive and extended programs, like Center X. On the other end are pre-internship programs and internship programs in which credential candidates are working in high-need schools with little or no preparation. By employing an on-the-job training model, we have solved the problem of unattended classrooms but have eliminated incentives for candidates to be prepared to teach. One result is that many teacher preparation programs in California have a new and disheartening mission: to prepare the unprepared while they teach. Of course, the biggest losers are the students denied access to a high-quality teacher.

PART I SUMMARY AND POLICY RECOMMENDATIONS

In the first part of this report, we have documented the shortage of qualified teachers in California's classrooms. More than 1 in 10 classrooms are staffed by individuals who have not received the appropriate credentials. These teachers are not evenly distributed across the state: they are most likely to be teaching our poor and ethnic- and language-minority students. Those students most in need of help to meet California's ambitious standards for student learning—those scoring lowest on current tests—are the most likely to have an underqualified teacher.

There have been numerous policy responses to this problem, including an increased capacity of CSU to produce more teachers, increased flexibility in CSU's programs to respond to the needs of a diverse group of potential teaching candidates, lowered barriers to out-of-state-teachers and institutions, and increased support for alternative routes into the profession. For the most part, these efforts have focused on increasing the quantity of teachers, with less attention paid to quality. In particular, efforts at streamlining preparation programs and internship programs decrease the amount of time teachers receive in preparation before being given full responsibility for a classroom. Most importantly, these policy initiatives are not focused on the hardest-to-staff schools.

In response to these findings, the Task Force has made the following recommendations:

Ensure that every child has a fully qualified, effective teacher.

- Implement a comprehensive program of preparing and placing qualified teachers in inadequately staffed schools through specifically focused competitive grants available to publicly supported colleges and universities which are located in areas with high percentages of inadequately staffed schools.
- Provide 100% forgivable state loans of at least $20,000, plus tuition fees and books to students who enroll in and complete a teacher preparation program and immediately go on to teach in a hard-to-staff school for a minimum of 4 years, by expanding APLE loans and Cal T grants.
- Expand SB 1X to provide annual discretionary grants of $350 per student for up to three years to enable inadequately staffed schools to attract and retain fully qualified classroom teachers, develop the skills and knowledge of the school's resident staff, and take steps to create a positive learning environment for students and teachers.
- Expand the provisions of existing law to require the Commission on Teacher Credentialing to notify annually all local education agencies when they employ more than 150% of the statewide average of under-qualified teachers, encourage the

identified districts to review and modify their recruitment, hiring, and placement practices.

- Encourage local policy makers and bargaining units to focus Peer Assistance and Review programs (PAR) on inadequately staffed school sites. Special attention in these efforts should be given to the identification, selection, and preparation of accomplished teachers responsible for ushering novice teachers into the profession.
- Provide training for accomplished teacher leaders called upon to provide professional development or support for novice teachers, and ensure that their classrooms are staffed by fully qualified teachers in their absence.
- Establish regional cadres of accomplished veteran teachers and recognized experts, with additional incentives for drawing from the pool of retired teachers, to provide professional development and support for novice teachers at inadequately staffed schools. Classrooms of teachers providing professional development and/or support for novice teachers must be staffed by fully qualified teachers.

Eliminate the hiring of unqualified teachers.

- Phase out the approval of waivers and emergency permits over the next 5 years, allowing waiver of credential requirements by Commission on Teacher Credentialing only in exceptional cases where specialized individual skill and talent or eminence is involved.
- Expand Cal T grants in size and number, with special emphasis on shortage fields (i.e., math, physical science, computer science, special education).

Improve the ability of the teaching profession to attract and keep fully qualified teachers.

- Revise the current beginning teacher salary incentive of $32,000 to establish a target minimum of $40,000 for fully qualified new teacher hires in order to make teaching more competitive with other professional opportunities in attracting talented and qualified individuals.
- Continue and expand through CalTeach and other state and local programs efforts to recruit teacher candidates whose background and experiences mirror those of the state's diverse student population.
- Provide incentives for developing and maintaining a professional working environment that address facilities use, scheduling, safety, materials, supplies, and other conditions under which teachers are attracted to and stay in the profession.

PART II. BUILDING AND MAINTAINING THE STRENGTHS OF THE CURRENT TEACHER WORKFORCE

As California struggles to attract and prepare a sufficient number of candidates for teaching—and to place them where they are in greatest demand—it faces the challenge of supporting those teachers already practicing in classrooms. Currently, there are approximately 284,000 practicing teachers in the state's public schools. Each of these teachers is being asked to do more with an increasingly culturally and linguistically diverse student body. If these teachers are expected to help all of California's students to reach the state's standards for learning, the teachers themselves will require high-quality learning opportunities.

More than a decade ago, an influential study commissioned by the legislature sharply criticized teacher professional development in California. The report, *Staff Development in California: Public and Personal Investments, Program Patterns, and Policy Choices,* found that professional development occurs "on the periphery of school and classroom life, a situation exacerbated and perpetuated by funding patterns, by a marketplace with short-term skill training, and by a daily and yearly schedule that squeezes staff development into widely separated days or hours."[1] In addition, the study found that classroom and school reinforcement, or follow-up, was rarely part of teachers' professional development.

Since that time, California has implemented numerous initiatives to improve professional development opportunities for teachers—as we discuss in detail later—and researchers have learned much about the kind of professional development that helps teachers improve their practice and increase student learning. Such professional development is characterized by a focus on subject matter expertise, building on teachers' knowledge of teaching, coherence with instructional goals, duration over a sustained time with sufficient follow-up support, and collaborative and active learning on the part of teachers.[2] Building on this research base, the California Professional Development Reform Initiative reviewed that literature and proposed a set of elements to guide the design of high-quality professional development. These elements include using data about student learning, developing and expanding teachers' ability to integrate pedagogical repertoire and content knowledge, and providing for collaboration, collegial work, and reflection.[3]

In light of the importance of equipping teachers for their expanded role in helping students reach standards and given an emerging consensus on the characteristics of high-quality professional development, we turn in this second part of the report to a set of questions related to teacher learning. First, what kinds of learning opportunities are available to and taken advantage

CHAPTER 5. SUPPORTING BEGINNING TEACHERS THROUGH THE CRITICAL FIRST YEARS

STATE POLICY

What is the state doing to support new teachers?

- California has a comprehensive policy to support new teachers. It requires that teachers go through a formal induction experience to receive a clear credential, has created standards to guide such programs and provides funds to support them, has supported model induction programs throughout the state, and has brought together the lessons from many of those models in the CFASST system.

DISTRICT SUPPORT

How do districts support new teachers?

- District induction programs traditionally have ranged from quick orientation workshops to full-time support providers working with new teachers throughout the school year.
- With the growth of state support for teacher induction, local programs are in a period of flux as they scale up, become more formalized, and begin requiring participation.
- A core issue for local programs is whether to build teams of full-time support providers for new teachers or to use a revolving group of veteran teachers who maintain their own classrooms.

NATURE AND QUALITY OF INDUCTION SUPPORT

What does induction support look like, and does it help teachers?

- Most beginning teachers (92%) receive some kind of induction support; the most common support involves attendance at workshops.
- For many teachers (50% to 68%), induction support includes opportunities to observe, be observed, and collaborate with their peers and mentors. Yet such experiences are infrequent, typically not taking place on a regular basis.
- Teachers who have opportunities for peer observation, who are formally assigned mentors, and who engage with mentors in frequent support activities are uniformly more likely to report those experiences as effective.

CHALLENGES OF BTSA SCALE-UP

- What districts can do to support new teachers depends largely on the proportion of new teachers in the local workforce.
- Few districts and no large urban districts we studied have the capacity, in terms of support providers or of professionals to help the support providers, to take the Beginning Teacher Support and Assessment Program (BTSA) to scale.
- Districts have yet to determine how BTSA, and especially the CFASST system, fits into other efforts to foster adult learning in their schools.

Supporting teachers as they first enter the profession is a core strategy for building and retaining a high-quality teaching workforce. It is during teachers' first years in the profession that they learn to meld their schooled knowledge with the everyday practice of teaching. In doing so, they develop instructional strategies and management approaches that form the basis of their practice through the remainder of their careers. It is also during this induction period that teachers make the decision whether or not to continue to pursue teaching as a career. Many teachers choose not to continue. Attrition rates among new teachers in California are extremely high. It is estimated that 30% of new teachers leave the profession within their first 3 years of service; figures go as high as 50% in certain parts of the state.[1]

Careful attention and support given to teachers during their first years of teaching can reduce attrition rates and enhance teachers' performance. Formal induction programs that provide systematic and sustained assistance in the form of guidance from experienced teachers, additional training, and individualized feedback can produce the long-term benefits of reducing frustration, isolation, burnout, and ultimately attrition.[2] With regular support from more-expert mentor teachers that focuses on classroom practice, beginning teachers are more likely to transition from a focus on discipline and classroom management concerns to concerns about teaching and learning.[3]

In this chapter, we begin our examination of teacher learning opportunities in California with four questions: What is the state doing to support new teachers during the crucial first year? What do districts do to support new teachers? What kind and how much support do new teachers receive? What is the quality and impact of that support? We conclude the chapter with a discussion of the issues involved in scaling up induction support to all new teachers in the state.

State Policy in Support of New Teachers

Policy-makers in California have long recognized the need to support beginning teachers. For more than a decade, the state has funded efforts to help teachers through the induction period. The state's initial effort was an extensive pilot study known as the California New Teacher Project (CNTP). The CNTP tested alternative models of providing support for beginning teachers by funding local pilot projects throughout the state. Findings from the CNTP indicated that effective induction programs could reduce attrition among first- and second-year teachers by two-thirds. One leading site in Santa Cruz has found that close to 90% of its participants are still in teaching 7 years later.[4] The CNTP also found that retention rates improved for minority teachers and teachers working in urban and rural areas. Moreover, new

teachers who participated in induction programs reportedly developed skills to plan complex and challenging instructional activities.[5]

On the basis of findings from the CNTP, guidelines for supporting beginning teachers were developed, and the Beginning Teacher Support and Assessment Program (BTSA) was authorized by SB 1422 in 1992. SB 1422 called for "the gradual phase-in of support and assessment for all beginning teachers in California."[6] The state has been working toward this goal: following 4 years of slow growth, the BTSA budget was nearly quadrupled in 1998-99 to bring the program "to scale," that is, to provide sufficient resources for all new teachers to receive support (Table 5-1). In addition, SB 2042 (1998) requires that teachers beginning their employment in school year 1999-2000 go through some formal induction experience to receive a clear credential.

Table 5-1
BTSA Funding and Participant History

Year	Funding	Number of Programs	Estimated Number of New Teachers Supported
1992-93	$4.9 million	15	1,100
1993-94	$4.8 million	30	2,300
1994-95	$5.5 million	30	1,900
1995-96	$5.5 million	29	1,900
1996-97	$7.5 million	32	2,000
1997-98	$17.5 million	73	5,500
1998-99	$67.8 million	83	12,410
1999-00*	$72.0 million	150	23,500

Sources: Mitchell et al. (1997); Bartell and Ownby (1994); Governor's Office of Child Development and Education (May 1998); Wright (1998).[7]
*Figures for 1999-2000 are estimates.

Standards and Assessment in Support of New Teachers

BTSA has been an integral part of the development of standards to guide both the teaching profession and programs that support new teachers. The bill that established BTSA, SB 1422, also called for the creation of standards for beginning teachers' knowledge and professional skills, and the establishment of standards for programs that support new teachers. The resulting documents are the *California Standards for the Teaching Profession* (CSTP) and *Standards of Quality and Effectiveness for Beginning Teacher Support and Assessment Programs* (or BTSA

Program Standards). Interestingly, what were originally intended to be standards for beginning teachers evolved into standards that are descriptive of ***all*** exemplary teachers. AB 1266 (1997) requires that BTSA grants go to local programs that foster the skills called for in the CSTP.

AB 1266 also requires that BTSA devise a way to assess beginning teachers that is aligned with the standards set out in the CSTP. The legislation states that BTSA must "establish an effective, coherent system of performance assessments that are based on the California Standards for the Teaching Profession...." In response to this directive, the BTSA Interagency Task Force formed a design team that developed the California Formative Assessment and Support System for Teachers (CFASST). This comprehensive assessment process integrates the use of formative assessment tools with new teacher support and training for support providers. Local BTSA programs are supposed to use CFASST unless they have a comparable local assessment instrument. Finally, the state has sponsored a *Handbook for BTSA Formal Program Review* that is meant to be used as a tool in both self-reviews and external reviews of BTSA programs.

The Evolving Mentor Teacher Program

As BTSA has grown, a key source of support providers for novice teachers has been the ranks of the California Mentor Teacher Program (CMTP). The CMTP was established by the Hughes-Hart Educational Reform Act of 1983 (SB 813) with the primary purpose of encouraging exemplary teachers to stay in the classroom by providing them additional compensation ($4,000 per year), as well as additional professional opportunities.[8]

Historically, the CMTP was funded at a much higher level than BTSA, rising from $67 million in 1990-91 to $80 million in 1998-99. Although no statewide figures exist, it is widely reported that many of the 11,000 CMTP teachers have served as support providers to teachers in BTSA.[9] In many districts, the two programs are coordinated to ensure a higher level of service for novice teachers.

In the 1999 special session of the legislature, AB1X 1 essentially eliminated the California Mentor Teacher Program—making it inoperative in July 2001 and repealing it as of January 2002. The legislation replaces the CMTP with the California Peer Assistance and Review Program for Teachers (PAR)—a peer review and assistance program for veteran teachers. The law does clearly state, however, that the primary function of a mentor is to provide "guidance and assistance to new teachers" and makes funds available under the statute (which includes those funds previously allocated to the CMTP) to be used in support of BTSA. Although PAR is not yet in place in districts, the legislative language, combined with additional funds allocated for

PAR, makes it likely that the new law will not result in the diversion of mentor teachers away from supporting novice teachers.

Issues in Understanding State Induction Support

Taken together, these various initiatives create the potential for a coherent system of support for novice teachers. California requires that teachers go through a formal induction experience to receive a clear credential, has created standards to guide such programs and provides funds to support them, has supported model induction programs throughout the state, and has brought together the lessons from many of those models in the CFASST system. Justifiably, California's support for induction is held up nationally as a systemic approach to supporting new teachers.[10]

Yet it is too soon to tell exactly how these recent policy changes will interact at the district and school levels. Full funding for induction has been in place for only one school year, the requirement that all new teachers participate is being phased in, and the future impact of PAR is unknown. Data from both the statewide teacher survey and the case studies of local systems of teacher development provide a portrait of a system in flux. Our data were collected during the period of BTSA scale-up: survey data generally refer to teachers' experiences in school year 1997-98, whereas the case study data come from school year 1998-99. Although the induction landscape continues to evolve, our findings provide insights into issues associated with the expansion of BTSA. We turn to these findings next.

District Induction Support

Given the rapid growth in state support for new teachers, district induction programs are evolving, growing, and becoming more formalized. At this point, the statewide picture is one of wide variation across districts in the degree and nature of support. This variation reflects in part the state tradition, from the very beginning of the California New Teacher Project, to encourage locally designed programs. As a result, early induction efforts, whether funded by the state or not, varied widely in how—and in how much—beginning teachers were supported. Local programs varied from quick orientation workshops to full-time support providers working with new teachers throughout the school year. In many districts, of course, induction also included informal relationships among individual teachers at the school site. The composition of the support cadre varied across districts, as well, with some opting for full-time support providers and others for part-time mentors.

The typical district induction program, pre-BTSA scale-up, combined some kind of formal district orientation, formal mentor support for a limited number of beginning teachers, and informal and ad hoc support for other teachers through the school year. For example, Selma Unified has long held a new teacher workshop for a few days at the beginning of each school year, which introduces new teachers to the profession and then gives them some pointers on classroom management.

Santa Monica similarly has had a district orientation. Since 1997-98, the district also has assigned formal mentors to most school buildings. District funds are used to hire substitutes so teachers can observe others' classrooms and mentors can observe new teachers in action. New teachers are also welcome to participate in teacher inquiry groups, Santa Monica's primary professional development vehicle. Although the inquiry groups do not necessarily provide specific teaching ideas or materials, which beginning teachers commonly say they need, new teachers find participation in the groups valuable because it involves them in "the life of the *whole* school." In the case of both Selma and Santa Monica, strong networks of informal support augment the district-sponsored efforts.

The Beginning Educators Support Team (BEST) Center in Elk Grove, which predates BTSA expansion by more than 5 years, provides another example of a balance between the many purposes of induction.

Elk Grove's BEST Center

The BEST Center in Elk Grove runs two simultaneous programs, one for elementary teachers and one for secondary teachers. Its programming is designed to provide an overview of district-specific standards, curriculum frameworks, and rules and regulations targeted at the balance of newly credentialed and experienced teachers who comprise EGUSD's new hires each year. Two master teachers lead each grade-level group at the elementary level. Two and a half introductory days for elementary teachers include a half day of orientation to the district, 1 day of reading and language and instruction, and 1 day of classroom management. These are followed up with eight monthly meetings: five meetings are 3 hours long and feature a presentation, usually by a district-level administrator, and grade-level discussion groups focused on the topic of the presentation; the other three meetings focus on classroom issues and are held at a master teacher's classroom (students are not present). Explained the elementary master teacher coordinator, "The new teachers spend 85% of their time on reading, language arts, and math [in the classroom]. In addition to classroom management and effective teaching, they are the main things to focus on: taking the [content] standards and benchmarks and resources and figuring out how do you start with that and where go from there. The main concern is that classroom management is in place so that they can teach. That's why we have 3 hours focusing on classroom management, and everything after that returns/alludes to that." A host of other topics are touched on, including parent communication and involvement, English language development, test administration, evaluation, clear credential application, and formulating a personal growth plan.

Through participation in BTSA, both Selma and Elk Grove augmented their traditional programs with more formal efforts reaching out to a greater number of first- and second-year teachers, with each new teacher formally assigned a mentor who works with him or her throughout the school year, following the materials for the California Formative Assessment and Support System for Teachers.

Both Elk Grove and Selma use veteran classroom teachers as support providers who take on this role in addition to their regular classroom duties. An alternative induction program model relies on full-time support providers who have been released temporarily from their regular teaching duties. For example, LAUSD has approximately 10 full-time BTSA support providers, whose primary responsibilities are to support new teachers in schools that do not have adequate numbers of mentor teachers.

The decision to release teachers full-time or to compensate full-time teachers for extra duty has implications for the ways in which new teachers experience induction support. Support providers whose primary responsibility is teaching their own students often do not have the

opportunity to work with new teachers in the classroom. Even when mentor teachers are given release time during the day *and* their mentees work at the same school, making it is possible for the mentor teacher to go to another classroom, mentor teachers typically do not want to leave their own students. Thus, new teachers have fewer opportunities to receive direct feedback on their instruction, and conferencing between support providers and new teachers most often occurs at the end of a full day of teaching.

In contrast, full-time released teachers, whose main responsibility is the development of new teachers' techniques and knowledge, have more flexibility in working directly in the classroom with novices. Below we describe how full-time support providers in LAUSD support new teachers.

Activities of LAUSD's Full-time Support Providers

Full-time LAUSD support providers assist new teachers one-on-one in the classroom, typically once every week for 2 months at a school before moving to another school lacking sufficient mentors. Support providers do classroom observations using the CSTP standards for classroom environment, recording what they see and hear, and then holding a dialogue with the teacher based on the script. They model teaching for the new teacher or take over one of the small groups. Explained one BTSA Advisor, "Frequently, you take over a small group, having discussed the lesson beforehand with the teacher, then you debrief about what happened. Other things usually come up, and you can explain the way you stand back and be a facilitator, the language you use, how to show respect to students. But also I've walked in more than once when somebody is dying up there. Sometimes it's not their fault; for example, they're in an auditorium and all they have is a blackboard and pointer, so I've taken over and used some old tried and true strategies that they don't know. So you throw them a life preserver. We recognize that teachers are developmental."

The Santa Cruz New Teacher Project, which we did not study directly as part of this work, also uses full-time support providers, who themselves receive a significant amount of professional development and who in turn focus solely on building the skills of new teachers. This kind of support is virtually impossible for a full-time classroom teacher to provide as a mentor teacher because he/she typically does not have enough release time.

Extent and Nature of Induction

Given the different—and evolving—approaches to induction across California districts, what kind of support do new teachers receive? Overall, support for novice teachers in California is widespread—and was so even before the scale-up of BTSA. In the 1998-99 statewide survey, 94% of teachers with less than 5 years of teaching experience report having received some form

of assistance during their first 2 years of teaching (Table 5-2). About half of the new teachers report receiving such support through a formal program; about half of these—or 28% of the total pool of new teachers—report participating in BTSA. We know from the case study data and from statewide figures that the number of teachers receiving support through BTSA expanded during the 1998-99 school year—more than doubling, according to state figures (see Table 5-1).

Table 5-2
Type of Support Offered New Teachers

Type of Support for New Teachers	Percent of All Beginning Teachers
Any support	94
Support through a formal state of district program	52
BTSA	28
Other formal program	24

Source: SRI statewide teacher survey. Data refer to school year 1997-98.

Characteristics of Induction Programs

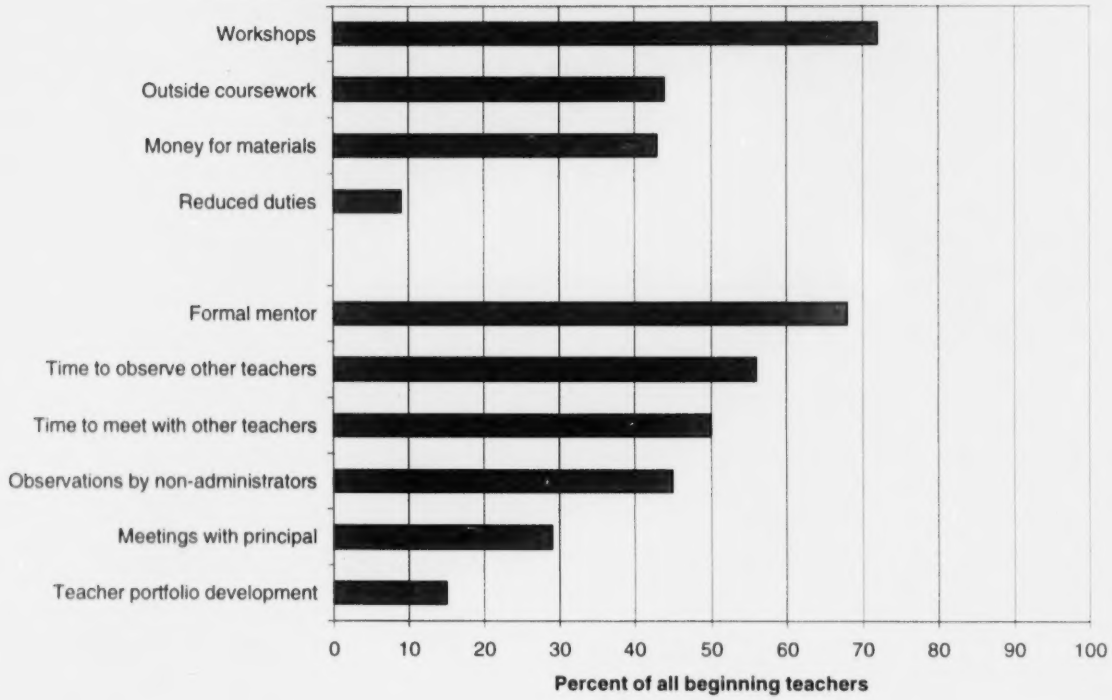
By far the most common type of support provided new teachers is the opportunity to attend workshops specific to them—more than 7 out of 10 new teachers report attending such activities (see Figure 5-1). From our case studies, we know that such workshops—especially toward the beginning of the school year—are typically focused on district policies and procedures, as well as on issues regarding classroom management.

Support for new teachers—importantly—also involves assignment to a mentor (68%) and providing time for new teachers to observe other teachers (55%) and to meet with other teachers (50%). Such opportunities are crucial because much of what teachers learn about their craft is "learned on the job," and it is through their interaction with others that they can become self-critical practitioners.[11] Time to meet with others can also serve to break down the traditional barriers created among teachers by classroom walls and bell schedules.

Novice teachers are bombarded with new responsibilities and, in some systems, are likely to get the most challenging assignments. We find that induction programs, whether funded through BTSA or not, rarely provide reduced duties (9% overall). In some instances, school principals and department chairs work to ensure that a new teacher's assignment is not overly burdensome, but none of the case study sites addressed the negotiated right of more senior teachers to request specific assignments, often leaving the most challenging to teachers new to

the district. We note that these findings are consistent with national patterns, where "reduced workloads for inductees are all but nonexistent."[12]

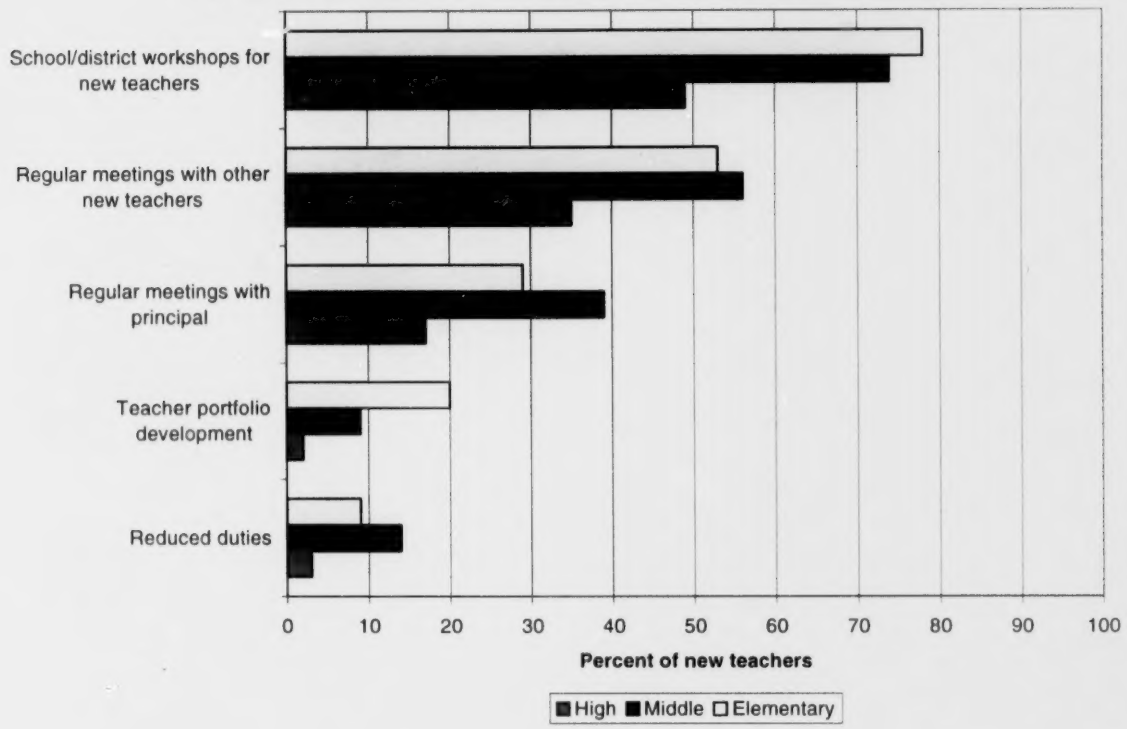
Figure 5-1
Induction Support Activities Offered to Beginning Teachers



Source: SRI statewide teacher survey.

High school teachers are much less likely than either their middle or elementary school peers to report any type of induction support (Figure 5-2). We should stress that individual school culture, grade-level culture, and department culture can be important determinants of the quality of the informal modes of support for new teachers. At the same time, these discrepancies across school levels point to the fact that many formal district support programs for new teachers do not reach into the high schools.

Figure 5-2
Significant Differences in Induction Support, by School Level

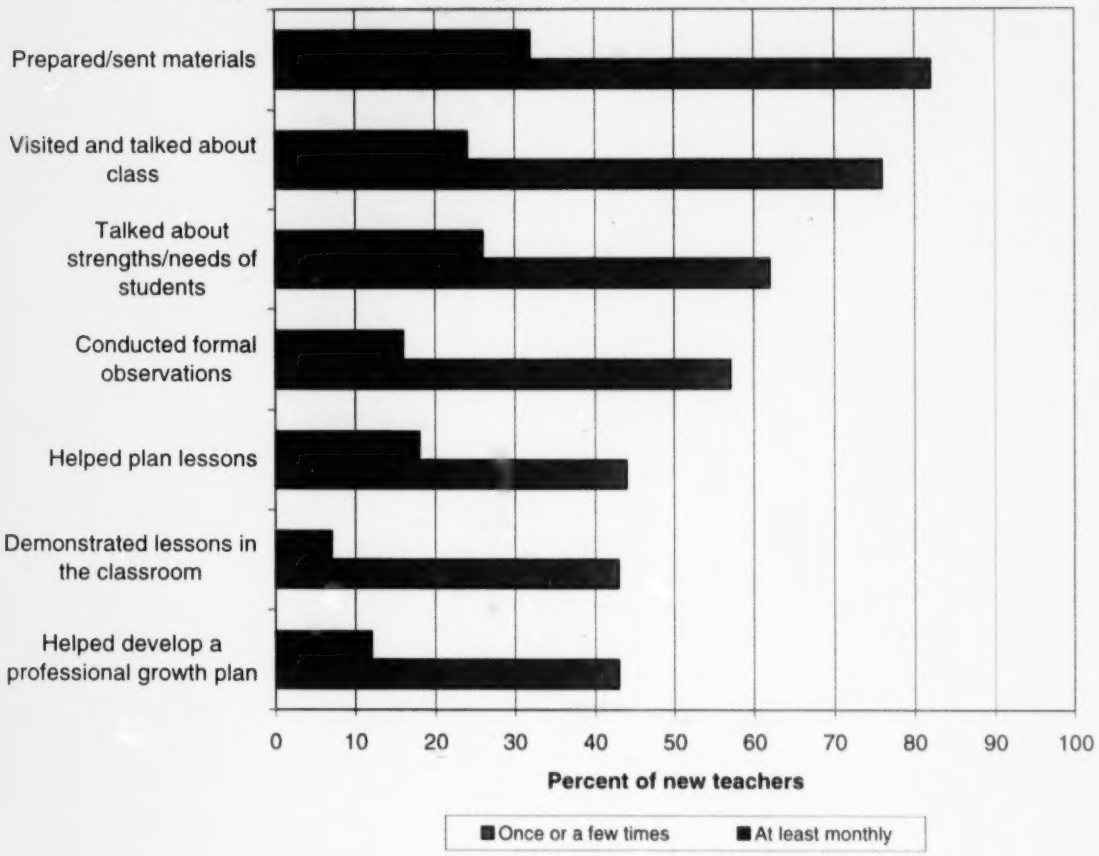


Note: Chi-square tests between school levels significant at p<=0.05 for activities shown.
Source: SRI statewide teacher survey.

Intensity of Induction

It is encouraging that a large percentage of novice teachers receive some type of induction support and that for a majority of these, such support offers opportunities for collaboration with other teachers. But how often do teachers engage in these activities? In Figure 5-3, we show teachers' reports of the frequency of various actions by their mentors or support providers. The general pattern is that mentors and support providers interact with their beginning teachers infrequently. For example, close to 60% of beginning teachers report that their mentors observed their classrooms—but only 16% report that such observations occurred at least monthly. Similarly, whereas 43% of beginning teachers report that their mentors demonstrated lessons, only 7% report that such demonstrations took place at least monthly.

Figure 5-3
Mentor Support Activities for Beginning Teachers, by Frequency of Activity



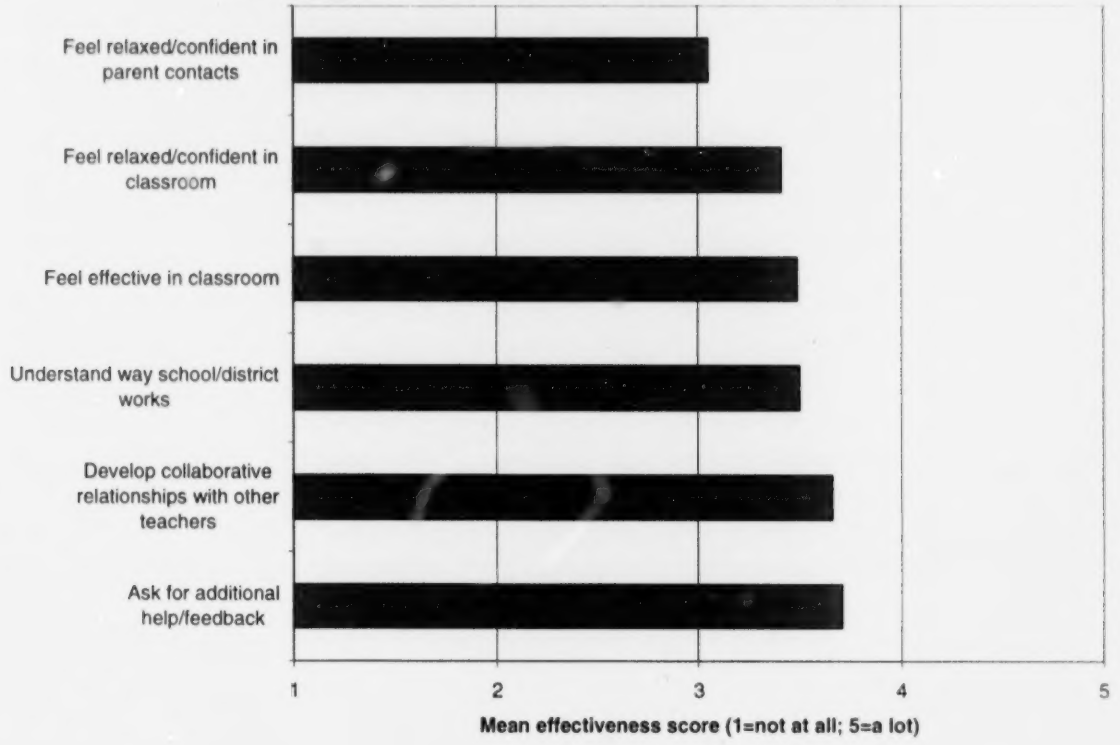
Source: SRI statewide teacher survey.

The infrequency of such support activities is not surprising. From our case studies, we know that most mentors and support providers are stretched thin. In many induction programs, support providers are practicing teachers who are helping beginning teachers in addition to carrying a full teaching load. Observing a mentee's class then requires that the mentor find someone to cover his or her class. In addition, matching beginning teachers with available mentors in the same field and the same grade level is often difficult—especially in the same school. When teachers are paired across schools, the travel burden further reduces their interaction.

Quality of Induction

The primary goals of induction support are to increase the quality of teaching and to retain teachers in the profession. We would expect a high-quality program to have impacts in both of these areas. Although we did not research teacher retention in this study, we did ask teachers to report on the impact of their induction experiences on their teaching skills and other professional competencies. In general, teachers report moderate impacts (Figure 5-4). Not surprisingly, high school teachers, who get less formal induction support, also see less impact of induction on their professional lives in every category of effectiveness that was asked in the survey.

Figure 5-4
Perceived Overall Effectiveness of Induction Support

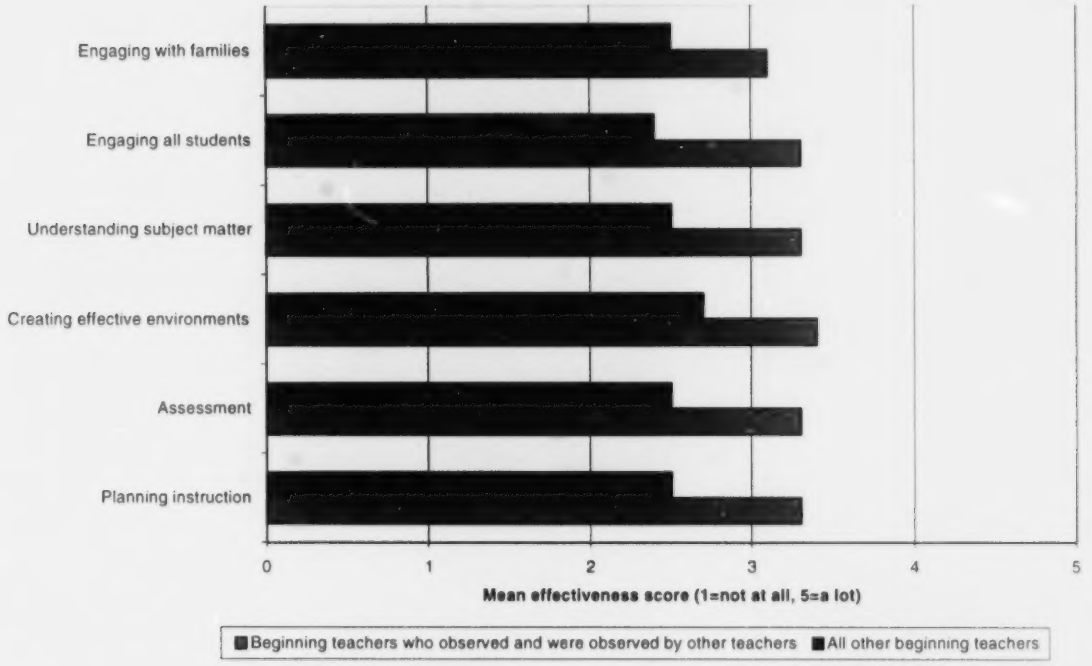


Source: SRI statewide teacher survey.

Teachers' perceptions of the effectiveness of their induction experiences differ, depending on the nature of those experiences. Beginning teachers whose induction supports include opportunities to observe and be observed by peers rate their overall induction experience as more

effective than do those who don't have such opportunities. As shown in Figure 5-5, beginning teachers who engaged in observation activities rated their induction experience as more effective in helping them increase their ability to master skills described in the *California Standards for the Teaching Profession*.

Figure 5-5
Perceived Effectiveness of Induction Support, by Participation in Observation Activities

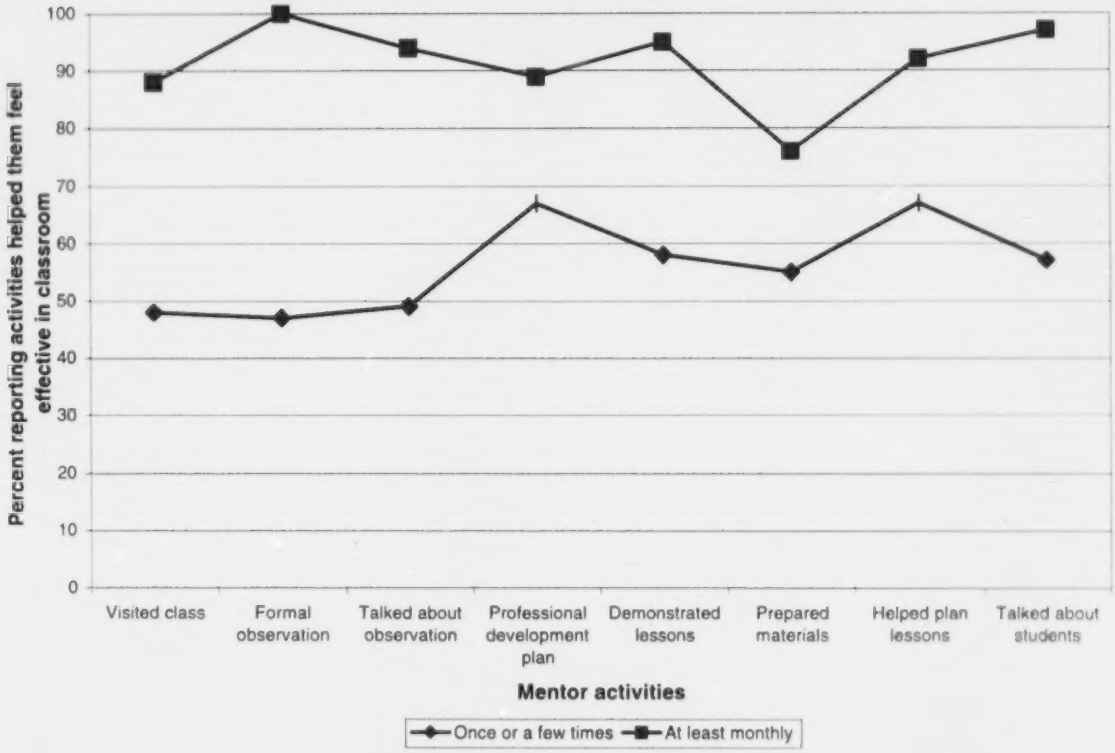


Note: Chi-square tests between beginning teachers who observed and were observed by other teachers, and all other beginning teachers, are significant at p<= 0.05.
Source: SRI statewide teacher survey.

Similarly, those beginning teachers who were formally assigned a mentor are more likely to rate their overall induction experience as more effective than their peers who were not. Additionally, the more frequent the mentor support, the more effective beginning teachers find it. In Figure 5-6, we examine teachers' reported effectiveness of various types of mentor support, contrasting those teachers who received the support regularly (at least once a month) with those who received that type of support once or a few times. In each case, teachers who received mentor support frequently and regularly found it more effective than teachers who received the support infrequently. For example, whereas fewer than half of the teachers who were seldom

observed by their mentors or support providers found the support "very effective," 100% of those teachers who were observed at least monthly did so.

Figure 5-6
Percent of Beginning Teachers Reporting Mentor Support Activities as Helping Them Feel Effective in Classroom, by Frequency of Activity



Note: Chi-square tests significant at p<= 0.02 for all mentor activities except demonstrated lessons (p=0.06) and prepared materials (p=0.07).
Source: SRI statewide teacher survey.

The general pattern from the survey and case study data is clear: the vast majority of beginning teachers receive some kind of induction support. Although the type of support reported by the greatest number of teachers involves attendance at workshops, induction support for many teachers includes opportunities to observe, be observed, and collaborate with their peers and mentors. Yet such experiences are infrequent, typically not taking place on a regular basis. Teachers who have opportunities for peer observation, who are formally assigned mentors, and who engage with mentors in frequent support activities are uniformly more likely to report those experiences as effective.

The Changing Landscape: The Expansion of BTSA

As California districts and schools are now faced with the availability of much more money to support induction efforts and the requirement that all their new teachers soon go through an induction program, we find them building on these previous efforts to formalize their programs and take them to scale. We visited schools and districts during the first year of the BTSA scale-up and observed very uneven and stuttering efforts to structure support for all new teachers. In this section, we highlight how induction programs are evolving in districts with the expansion of BTSA. We discuss the issues involved in reaching larger numbers of novice teachers, formalizing what had been an informal process in many districts, finding a sufficient number of support providers, and integrating the growing BTSA programs into ongoing reform efforts in the district.

Scaling Up BTSA

Regardless of how districts supported new teachers in the past, they are all changing—or planning to change—their approach, given the infusion of dollars into BTSA and the requirement that all new teachers soon go through a formal induction process. Districts begin the scaling-up process on different trajectories based in part on the supports they provided to their new teachers in the past. In some cases, typically where the needs are the lowest (fewer new teachers, strong informal supports in place), districts are still in the planning stage. El Centro and Santa Monica had not begun a BTSA program at all, though they had just received or were in the process of applying for BTSA grants. Few teachers in Eureka participate in the BTSA program housed in Del Norte County. In these cases, new dollars are welcome, but there is not a sense of urgency to implement a formal program. In other sites, however, big changes are under way. In general, these changes are taking two forms: increasing the number of teachers served and formalizing previously informal arrangements.

BTSA dollars and new credentialing requirements have pushed districts to serve more teachers. Again, in districts with few new teachers, the scale-up is rather straightforward. Selma quickly designed a program and is serving all its 40 new teachers—as well as a few from surrounding districts that have not yet put together a program. But in other districts, the numbers are daunting. San Diego's BTSA program has traditionally served 70 to 90 teachers. In 1998-99, that number was increased to 500, with the goal of reaching 1,100 in school year 1999-2000. But the district has 1,700 first- and second-year teachers, so the program still has a way to go. San Francisco increased its participants from 50 to 180 teachers in 1998-99, but it has close to 1,000 first- and second-year teachers. Elk Grove served 53 teachers in 1998-99, its second year

of BTSA implementation, but this again is only a fraction of the hundreds of first- and second-year teachers in the district.

Formalization of the BTSA Process

The receipt of BTSA dollars and/or the scale-up of previous induction efforts has also resulted in the formalization of what was in many districts a relatively informal process. First, there is slow movement toward mandating participation in the district's induction program. Among our case study sites, only Selma has taken this step so far—but, of course, that is the only site with a BTSA program that has the capacity to serve all its new teachers. In the other sites, administrators are struggling with how to transform what was traditionally a volunteer program and make it part of a new teacher's required duties. For example, San Francisco's BTSA program has a number of strong components, including a series of required full-day Saturday workshops. Among the volunteer participants, the workshops are highly valued; as one participant described, "The first Saturday workshop was on the physical environment of the classroom. It was great. Outside consultants gave the workshops. We looked at slides of other people's classrooms, what they looked like, the math area, the reading area. How to get everything organized." But will it be feasible to hold—and require—such workshops for nearly 1,000 teachers?

As they reach larger numbers of beginning teachers, local induction efforts also struggle with formalizing what often were informal ways of supporting new teachers. As Santa Monica plans for a BTSA grant, it is considering how to adapt its current support structure, which relies on individual school-based mentors who provide varying degrees of support to teachers, depending on the mentor's perception of need, to create a more formal one with district oversight and a formal assessment component, as required by BTSA.

As noted earlier, both Elk Grove and Selma have already begun participation in BTSA. In both places, one support provider, who is a full-time teacher, ideally serves two beginning teachers. Beginning teachers are expected to meet with their support providers weekly to complete the CFASST portfolio. Support providers meet monthly to voice their concerns and reflect on their roles as mentors. Meeting times are generally arranged by each mentor/mentee pair on their own schedule, although Selma reserves one early release day per month for BTSA meetings, and Elk Grove designates five to six meetings throughout the school year for participating beginning teachers and support providers to work together.

Reactions from new teachers participating in these well-structured programs are mixed. Teachers generally like the communication with their mentor. One participant noted:

> "The best thing about BTSA is the one-on-one mentor. If you're fortunate, you have someone who really listens. [My mentor] is a very good teacher. We e-mail back and forth. We're supposed to meet once each week, but we teach on different tracks...."

Yet some teachers report that the CFASST process turns into a paperwork burden—and at times can become an end in itself. "I get tired of filling out those forms every time I see my mentor," noted one teacher. A number of teachers note that they would have preferred to have an informal mentor at the school site and "forget all the paperwork."

The formalization of the induction process certainly facilitates the definition and communication of these activities to large numbers of beginning teachers and support providers. The paradox that faces districts, however, is that as districts recruit more and more beginning teachers into BTSA, the range of teachers' needs increases, and this variation in needs is increasingly met with a highly standardized, though well-developed, program that may not sufficiently reflect individual needs and concerns.

Capacity Issues

The number of teachers participating in BTSA will increase tenfold from school year 1996-97 to school year 1999-2000, and it will have to nearly double again to reach all new first- and second-year teachers. A scale-up of this magnitude necessarily strains the capacity of the system—in terms of both quantity of support providers and the quality of their work. Because the distribution of new teachers is uneven, the challenge of the scale-up is much greater in some districts than in others.

In San Diego, the district had used full-time resource teachers to provide direct support to the most needy new teachers, while full-time classroom teachers served as traditional support providers to other new teachers. As the program grew, the full-time teachers were given three new teachers to work with instead of two. The results were quite poor: overworked support providers and unsupported teachers. As the district scales the program up further, it is going to use its full-time resource teachers to help the support providers, who, in turn, will be assigned only two beginning teachers each. The problem with this strategy is that it requires close to 900 support providers, nearly one out of six veteran teachers in the district.

The magnitude of the challenge facing local districts depends on how many new teachers they have relative to veterans and on how "new" those new teachers are—whether they are new to the profession or just new to the district. For example, El Centro in the Imperial Valley hired approximately 24 teachers in 1998, but most of them had a few years of experience in surrounding districts. Similarly, Eureka hires only a dozen new teachers a year and is able to

pick and choose among the best of hundreds of applicants. In contrast, Elk Grove, in the suburbs of Sacramento, hired approximately 500 in 1998-99—a full quarter of its teaching force. But because of its strong recruitment program, only 35% of these were teachers new to the profession. In San Diego, the story is mixed. Most schools have low turnover and few new teachers; some hard-to-staff inner-city schools are forced to hire proportionally more teachers and to use more interns and emergency-permit teachers. LAUSD hired almost 4,000 new employees in 1998. As we have detailed earlier in the report, 75% of these are on emergency permits, waivers, or internship credentials. Only 9% of the new hires are newly credentialed teachers; the remaining 16% are credentialed reentrants.

Districts with disproportionately few new hires or with new hires who are predominantly experienced teachers face much less of a challenge. They have few teachers to serve, the teachers already know how to teach and so have fewer needs, and there are more veteran teachers to provide support. Consequently, in districts like Santa Monica, El Centro, and Selma—where these conditions hold—induction has traditionally been a more informal arrangement. Support has been provided through principals and school teams, augmented by orientation sessions from the district.

Faced with large numbers of new teachers or high proportions of teachers new to the profession, districts traditionally have been forced to create more formal structures for induction support. In Elk Grove, the BEST Center is a centralized effort to uniformly support all new hires each year. In LAUSD, the sheer number of new hires throughout the year and the predominance of emergency permit holders require that the district run its Teacher Academy for new teachers every week without break, except Thanksgiving. Nine or 10 sessions run concurrently during the peak summer months.

Integrating BTSA into Ongoing District Reforms

A final issue facing districts is how to fit BTSA, especially the CFASST system, into other efforts to foster adult learning in the district schools. Every district in our study had its own reform thrust and its own strategy for supporting teachers to improve their practice, as we discuss in the next chapter. Santa Monica has established inquiry groups for teachers, and these groups set the agenda for professional development. As new teachers are integrated into these supportive groups, it is not clear where CFASST will fit in.

San Diego has launched a district-wide literacy initiative. At the core of the initiative is the role of the principal as the key provider of professional development for teachers in the building. Principals are supposed to spend a good portion of their day in classrooms, and they are going

through extensive professional development themselves. Principals also retain the central role of evaluating teachers, and that evaluation is supposed to take place in relation to specified district priorities. The BTSA system, which seeks to have support providers assess teachers relative to standards other than those in use in San Diego and which excludes the principal from that assessment process, may clash with the district initiative.

None of these issues—formalization of BTSA, capacity, or integration of reforms—should stop districts from moving forward with induction programs for new teachers. But as they advance, it is important to keep in mind the kinds of challenges they will face. Just as importantly, the state needs to consider these issues in terms of the kinds of support local districts need and the kinds of regulations that might be difficult to follow.

CHAPTER 6. BUILDING ON THE STRENGTHS OF THE TEACHER WORKFORCE: PROFESSIONAL DEVELOPMENT

What is the nature of teachers' professional development experiences?

- Teachers participate in a wide spectrum of professional development, but the most common activity is workshops offered by their schools or districts. Those engaging in high levels of professional development do so on their own initiative.
- Teachers in high-poverty schools are more likely to participate in workshops, are less likely to receive training in technology, and participate in activities sponsored by the California Subject Matter Projects at twice the rate of their counterparts in low-poverty schools.
- On average, teachers spend more time on professional development as they gain experience, peaking some time between their 6th and 10th years. Opportunities to mentor novice teachers is an important source of professional growth for experienced teachers.

What is the content of teachers' professional development opportunities?

- The most common focuses of professional development tend to be new curriculum and technology.
- Elementary school teachers participate in more professional development during the year, primarily based on school and district initiatives in early literacy. Middle and high school teachers seek subject-matter-specific activities typically provided by professional associations.

How do teachers perceive the quality of their professional development and does it meet their needs?

- Overall, teachers provide mixed reviews of the quality of their professional development. Fewer than half report that their experiences are sustained and tailored to their instructional areas.
- Teachers emphasize the importance of collaborative work between colleagues. However, workplace conditions in overcrowded, urban, high-poverty schools constrain teachers' ability to collaborate.
- Teachers do report greater professional growth as a result of certain types of learning opportunities, such as frequently sharing student work, working together to develop curriculum materials, and observing each other's classrooms.

The vast majority of teachers—more than a quarter million—are "veterans" who teach most of California's schoolchildren. Creating learning opportunities for the state's students to reach high standards will require opportunities for these experienced professionals to learn, as well. The state has established a research-based vision of high-quality professional development that calls for opportunities for teacher learning characterized by a focus on using data about student learning, expanding teachers' instructional repertoire and content knowledge, and providing for collaboration, collegial work, and reflection.[1]

In this chapter, we explore California's teachers' current professional development relative to this vision. We explore three key questions: What is the nature of professional development opportunities that teachers currently have, and how do they differ for various groups of teachers? What is the content of their professional development? What is teachers' perception of its quality and does it meet their needs?

Nature of Professional Development

Teachers in California have access to a broad constellation of professional development opportunities, ranging from specific skills training to reflection within a community of practitioners, from one-shot events to intensive experiences sustained over time, and from activities mandated for all teachers within the school or district to teachers' choice to participate as individuals without colleagues from the same school community.

Teachers, on average, report that they engaged in 122 hours of professional development, defined broadly, in 1997-98, equivalent to approximately 3 work-weeks or about 2 hours and 20 minutes per week throughout the year. This time includes professional development activities sponsored by the school or district (e.g., workshops, committee work related to curriculum and instruction), activities conducted by outside providers (e.g., NCTM and other subject matter associations, California Subject Matter Projects), and activities that teachers select and complete independently (e.g., professional reading, individual research, graduate and extension courses).

Although teachers face a wide range of options, the most common forms of professional development are workshops. Ninety-two percent of teachers participated in workshops led by school staff and 87% in workshops led by district or external trainers. Participants averaged 19 hours for each type of workshop. An impressive majority (74%) report that they have regularly scheduled collaboration with their colleagues; however, the amount of time averages a mere 44 minutes per week for those who have it at all (see Table 6-1).

Table 6-1
Professional Development Activities Reported by Teachers

Activity	Percent of Teachers Participating	Average Annual Hours per Participant
Workshops and training designed and/or led by school staff	92	19
Workshops and training designed and/or led by outside consultants or district/county staff	87	19
Independent professional reading, not necessarily focused on a specific topic	71	35
Activities, such as conferences or working groups, sponsored by subject matter professional associations (e.g., NCTE, NCTM)	47	19
University extension or adult education courses, excluding alternative certification programs	29	50
Graduate courses in your academic subject area(s) (e.g., math, science)	18	76
Regularly scheduled collaboration with other teachers	74	27
School or district committee on a topic related to curriculum and instruction, including standards, curriculum, and textbook selection committees	61	16
Individual or collaborative research on a topic of interest to you professionally	37	37
Activities sponsored by one or more California Subject Matter Projects (e.g., Writing Project, Math Project)	22	25

Source: SRI statewide teacher survey.

Teachers reporting high amounts of professional development in 1997-98 (more than 145 hours) tend to supplement workshop experiences with more extensive involvement in graduate and extension courses, the California Subject Matter Projects, research, or independent professional reading. In contrast, teachers reporting low levels of professional development (fewer than 70 hours) participate primarily in school- or district-sponsored workshops for fewer hours, on average. Underlying these state averages, important differences in the nature of professional development occur between low- and high-poverty schools and between teachers at different stages of their careers.

Differences in Professional Development between Low- and High-Poverty Schools

In Chapter 3, we described the high concentrations of underqualified teachers in high-poverty schools, where the students have the greatest instructional needs. Are there also differences in teachers' professional learning experiences at high- and low-poverty schools? A greater percentage of teachers at high-poverty schools (93%) than teachers of low-poverty schools (83%) report participating in workshops conducted by individuals outside of their school community suggesting a slightly greater reliance on outside expertise. Further, teachers in low-poverty schools report far more training in education technology than do teachers in high-poverty schools. In 1997-98, teachers in low-poverty schools averaged 22 hours of training in education technology, almost triple the 8 hours teachers in high-poverty schools received. These findings suggest that high-poverty schools have somewhat less capacity to build the skills of their teachers.

On the other hand, the California Subject Matter Projects, which are generally considered high quality, intensive, and subject matter focused, reached 31% of teachers from high-poverty schools in 1997-98, double the percentage of teachers in low-poverty schools. Under new legislation, the CSMPs are required to hold 75% of their positions open for teachers from low-performing schools. Given the correlation between low-performing schools and high poverty levels, we would expect to see the percentage of teachers from high-poverty schools participating in CSMP-sponsored events to increase over time, and thus a larger investment in the teachers in high-poverty schools.

Professional Development Needs during Different Stages of Teachers' Careers

As teachers gain experience, the extent and nature of their professional development changes, probably because of shifting incentives and needs over various stages of their careers. First, we observe a steady increase in the total amount of professional development from teachers in their first 2 years of teaching to teachers with 3 to 5 years of experience, peaking when teachers are in their 6th to 10th years of teaching. The development process for novice teachers is marked by high workshop involvement as they seek improved instructional skills and effective classroom activities, as well as attendance in graduate courses, presumably to complete the requirements for a preliminary or professional clear credential. At the height of teachers' participation in professional development, they engage in training with outside experts and revisit graduate coursework, perhaps to obtain a master's degree or advanced or additional certification (e.g., BCLAD/CLAD, special education, new teaching assignment).

Teachers with more than 10 years experience report fewer professional development commitments. Typically, those who have reached the top of the pay scale no longer receive any incentive to attend staff development. We found that veteran teachers report lower participation in school-based workshops but maintain relatively high involvement in what they view as collaborative activities. Veteran teachers also told us that the types of professional development they value, which they feel are different from what less experienced teachers need, are not offered through typical workshop training. Thus, they tend to be highly selective in participating in optional district- or school-offered professional development. As one veteran high school English teacher in a suburban district told us, "I can afford to be choosy—I have a clear credential.... It's not a motivation to take classes to raise my pay; my time is too important."

Often, veteran teachers seek opportunities with outside affiliations that allow them to develop new roles in their teaching careers. For example, one high school physics teacher in Elk Grove has become a teacher trainer for California in an applied physics program that has its genesis in the tech-prep/school-to-career movement. The district spent $6,000 on a 4-week summer course in Colorado, where she studied every unit of the Principles of Technology curriculum, and when she returned, she implemented the Principles of Technology program at her high school for students tracked out of regular high school physics. She usually spends 2 weeks each summer conducting training for other teachers outside of her district. The teacher finds her work with Principles of Technology deeply meaningful— "I know it affects 20 to 30 [students'] lives every year"—and her work in training other teachers in this program is integral to her service to students.

Mentor Teacher Opportunities. One of the few ways that teachers can mark different stages in their careers is by mentoring novices. Both the National Board for Professional Teaching Standards (NBPTS) and the California Standards for the Teaching Profession (CSTP) endorse opportunities to teach colleagues as an important responsibility of accomplished teachers. In our survey, almost one-quarter (23%) of all teachers have been assigned to support beginning teachers—for example, as a mentor teacher or BTSA support provider—within the last 5 years.

Overall, teachers view their experiences as mentor teachers as positive professional learning opportunities for them. Approximately two-thirds think that their experience as mentor teachers helped improve their own instructional strategies (67%) and increased their motivation and commitment to teach (69%). Approximately half of the mentor teachers feel that opportunities to observe others (52%) and have others observe them (46%) strengthened their

teaching. In addition, being a mentor teacher helped half of them (49%) deepen their subject matter knowledge.

These findings corroborate interviews with mentor teachers in case study sites, who discovered much value for their own teaching through working with new teachers. For example, BTSA support providers become more familiar with the CSTP because they are embedded in the California Formative Assessment and Support System for Teachers. As one mentor teacher from Elk Grove reported, "I never really knew what the California Standards for the Teaching Profession were all about until I had to teach them. I found myself applying them to my own teaching." Other mentor teacher assignments can include projects of special interest to teachers, such as a high school computer teacher who received funding through the California Mentor Teacher Program to lead the implementation of a Digital High School grant. These roles provide a mechanism for teachers to differentiate stages in their individual careers and explore and deepen professional interests, bringing renewal to experienced teachers.

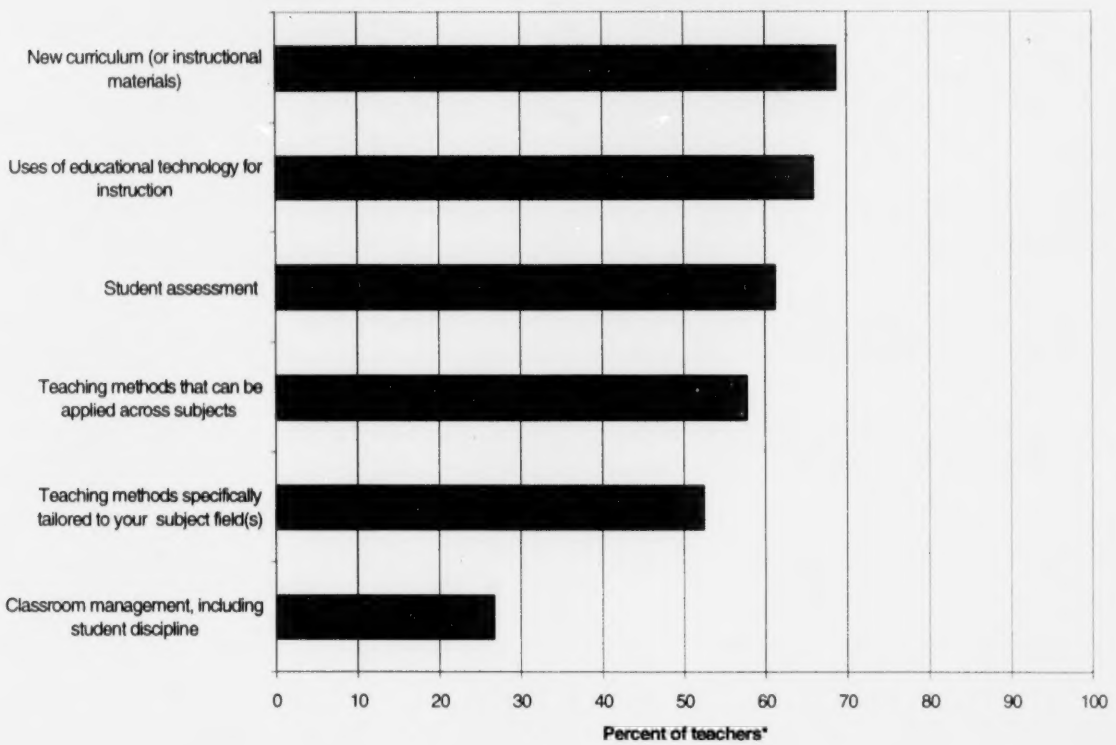
Despite some clear benefits to being a mentor teacher, mentor teachers often report burnout, particularly when supporting new teachers. Not surprisingly, mentor teachers frequently cite time as a crucial factor in their ability to sufficiently support new teachers. In some case study districts, mentor teachers receive specific funds for release time for themselves and their mentees, but face the dilemma of supporting their mentees or staying in their classroom. Almost one-quarter (23%) feel that their mentor responsibilities took away too much time from their classroom teaching. Conversations between mentor teachers and mentees are "catch as catch can"—snatched at the photocopier or over lunch. Mentor teachers use some of their own prep time to see beginning teachers' classes. Regularly scheduled meetings with mentees or with other support providers generally occur after school. Finally, capacity to support beginning and emergency teachers is thin. Mentors report shortages of experienced, skilled teachers willing to serve as mentors. Often, the result is that existing mentors must try to support too many beginning teachers at the same time.

Content of Professional Development Activities

High-quality professional development implies not only a structure conducive to learning but also relevant and deep content—*what* do teachers have the opportunity to learn? Teachers report that the focus of professional development activities most often is new curriculum or teaching methods. For the 1997-98 school year, more teachers report that their professional development focused on new curriculum than on teaching methods designed to cut across grades and content areas (69%, compared with 58%). However, fewer teachers (52%) report that their

staff development activities focused on teaching methods that are tailored to their particular teaching assignment. Almost two-thirds (66%) report that their training often focused on uses of educational technology, and approximately 60% report that activities focused on student assessment. (See Figure 6-1.)

Figure 6-1
Focus of Professional Development Activities



* Percent of teachers reporting that their PD activities overall had specific focus.
Source: SRI statewide teacher survey.

Teachers at different grade levels have different needs that largely influence the focus of their professional development. Overall, elementary teachers spent 10 more hours on professional development over the course of the 1997-98 school year than did secondary teachers. Case study data suggest that the extra professional development time is related to emphases in reading and early literacy. All of the case study elementary sites provide their teachers with more extensive workshops focused on early literacy than on any other content area.

Reading initiatives at the middle and high school levels are less common and less extensively supported.

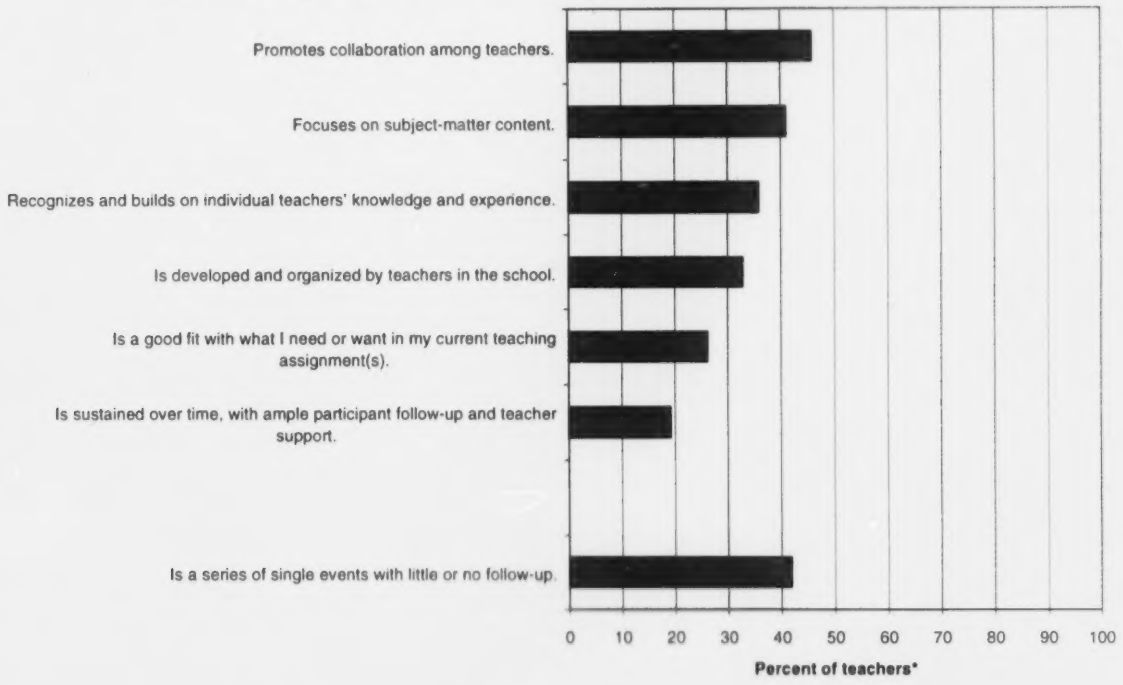
In contrast, middle and high school teachers seek content-specific professional development activities from subject matter associations. High school teachers repeatedly told us that professional development offered schoolwide did not meet their subject-matter-specific needs, and they looked to professional associations and conferences to gain more depth in specialized fields of knowledge. A language arts teacher at the middle school in Los Angeles, for example, is an expert in reading across the content areas, the writing process, and literary analysis. The most influential experiences for her professional growth originated outside of the district, specifically with the California Literacy Project. She also seeks professional development from National Council of Teachers of English and International Reading Association conferences and local colleges rather than the district's offerings. In addition, she is involved in a variety of mentoring and trainer activities. Unfortunately, the high turnover of staff and the high numbers of emergency teachers at her school mean that this accomplished teacher has few peers to learn from in her own school community.

We see, then, that teachers face a wide range of professional development opportunities that vary in both type and intensity. The professional development that teachers receive depends, in part, on where they teach, how long they have taught, and their grade level. How do teachers perceive the quality of these professional development activities, are these activities meeting their needs, and what is the impact of their professional development experiences? We turn to these questions next.

Quality of Professional Development

California teachers give at best moderate reviews to their professional development. Although teachers most frequently suggest that they need more time to talk to one another, fewer than half (46%) report that their overall professional development experiences often or very often promote collaboration. Only 36% of teachers report that their staff development often recognizes and builds on their knowledge and experiences. And only about one-quarter (26%) of California teachers report that their professional development is often sustained over time, with ample participant follow-up and teacher support. Correspondingly, 42% report that their professional development is most often a series of single events with little or no follow-up (see Figure 6-2).

Figure 6-2
Prevalence of Certain Characteristics of Professional Development


Promotes collaboration among teachers.
Focuses on subject-matter content.
Recognizes and builds on individual teachers' knowledge and experience.
Is developed and organized by teachers in the school.
Is a good fit with what I need or want in my current teaching assignment(s).
Is sustained over time, with ample participant follow-up and teacher support.
Is a series of single events with little or no follow-up.
0
10
20
30
40
50
60
70
80
90
100
Percent of teachers*

* Percent of teachers reporting that PD activities reflected specific characteristic often or very often.
Source: SRI statewide teacher survey.

The survey data, which case studies corroborate, indicate that disconnected workshops still dominate the staff development experiences of a majority of teachers. Even though workshops can be used in effective ways as a component of a coherent training program, part of the problem with the workshops that teachers currently experience is their typical lack of differentiation for teachers with varying skills and experiences. Without sufficient time and follow-up to delve more deeply into the topic and to have opportunities to individualize the training, workshops must be general, and often are targeted at those in most need—newly credentialed, emergency, or weak teachers. Typically, veteran teachers characterized their district's menu of workshops as "watered-down" and "general." One middle school teacher who led reading workshops observed, "The staff is polite; they listen, but that's about it. They don't do anything with it." Absent any coherent plan, staff buy-in, and multiple opportunities to discuss, try out, and reflect on new concepts, teachers feel little impact from such workshops. In a suburban district, a high school teacher with more than 10 years experience recounted, "In the last 2 to 3 years, I've logged 100 hours of reading training and reading in the content area. A lot of it is repetitious;

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it's just basic good teaching, but I'm not a new teacher." She went on to articulate the very dilemma schools and districts face: "Do you develop courses for new teachers or veteran teachers or touch everyone?" In the same district, another teacher is meaningfully engaged with national reform efforts like the Institute for Learning at the Learning Research and Development Center (LRDC), and finds the district's professional development offerings weak. "I've tried to push the district [to use resources from LRDC], and it did not work. So I've been seeking my own professional growth outside of the district."

Importance of Collaborative Work

Teachers highly value collaborating with and learning from their colleagues. Instead of single workshops that provide few opportunities for teachers to exchange ideas, teachers emphasize the importance of collaboration. "That district speaker may be inspirational, but the only time I will actually change the way I teach is through working and learning with a team or colleague at the school," reported one teacher. Teachers consistently reiterate the value of sharing and learning from each other and the need for more time more frequently to do so. As one Santa Monica teacher reported about her inquiry group, the major source of professional development for teachers in that district, "Inquiry is a place to think about things in whole new ways, so you can redefine yourself as a teacher, and be experimental. This is where I started to think about teaching as an art form. There are so many different ways to teach a kid something, why stick with a way that doesn't work? Why don't you look at the kids that you have, really think about them, and decide how you're going to teach them? For me, inquiry does that."

A collaborative work environment fosters team approaches to problem solving and permits professionals to seek help from other professionals. In our survey, the majority, almost three out of four teachers, report that they have regularly scheduled collaborative time. In general, half to almost 70% of teachers report that they often discuss common problems with each other. But far fewer engage in substantive collaborative work; specifically, 46% often share student work, 40% often work together to create curriculum, and only 8% often observe each other. Indeed, almost one-third (31%) of all teachers report that they "never" observe each other (see Table 6-2).

Table 6-2 also reveals that, along every dimension, fewer teachers at high-poverty schools than at low-poverty schools report engaging often in collaborative activities. One explanation for this difference in work cultures stems from the drastic overcrowding and relatively larger proportion of new and underqualified teachers in urban, high-poverty schools.

Table 6-2
Frequency of Reported Collaboration Activities

Collaboration Activity	Percent of Teachers Reporting "Often" or "Very Often"		
	All Teachers	Low-Poverty Schools	High-Poverty Schools
We share ideas about subject-matter content openly	69	75	66
We share views of students and how to relate to them	60	65	56
We seek each other's advice about professional issues and problems	59	67	49
We meet to discuss particular common problems and challenges we are facing in the classroom	57	62	51
We share views of students' families and how to relate to them	50	57	50
We share samples of work done by our students	46	51	41
We work together to develop teaching materials or activities for particular classes	40	55	33
We observe each other's classrooms to offer feedback and/or learn ideas (***excluding*** observation for purposes of formal evaluation)	8	13	5

Scale: 1=never, 2=seldom, 3=sometimes, 4=often, 5=very often
Source: SRI statewide teacher survey.

Professional development in the overcrowded, hard-to-staff school.

Overcrowding and underqualified teachers restrict teachers' professional development opportunities. Teachers and administrators argue that workplace conditions in overcrowded, hard-to-staff schools—year-round schedules, teachers without their own classrooms, and the constant need to address the most urgent crisis of the moment—are demoralizing and undermine the professional culture of the schools.

Year-round schedules reduce the possibility for schools to have the entire staff or grade level together for any kind of professional development activity. Students and teachers are subdivided into three or four tracks, with one track on vacation at any given time. Thus one-quarter to one-third of the faculty are always unavailable for any staff development. Schools typically repeat workshops twice to make sure all teachers receive particular training or

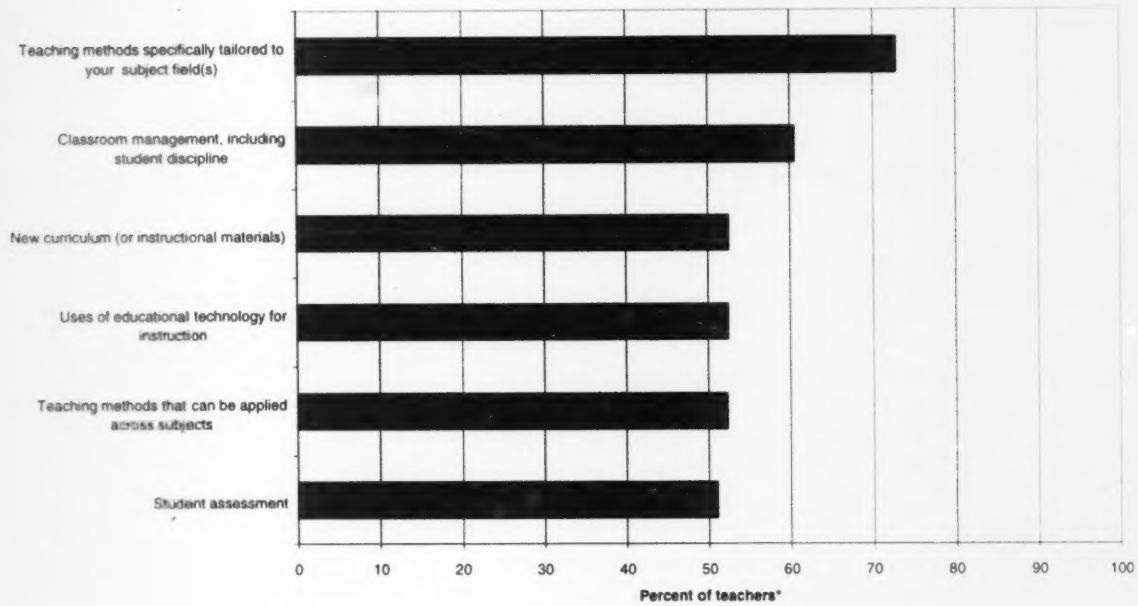
information. Sharing among colleagues is further restrained by the schedule. "It's like having three separate faculties. Buy-back days don't work outside of the instructional year. School is on all the time. In the past, at least we could juggle things and hold staff development when everyone was here." In large urban secondary schools, the professional community can be nonexistent. One teacher says, "You can't get the entire faculty together at the same time. There are many people on the faculty that I don't know. I don't even know who is a sub and who is a regular teacher."

A deeper problem of the year-round schedule is the ghettoization of a particular track in schools with high numbers of new and emergency teachers. Senior teachers usually choose the track that most resembles the traditional school year. The track that runs through the summer, with the official year-end on June 30 and the official start on July 1, is the least popular because teachers end with one group of students and begin with another without a break at all. It is this track that gets filled with the newest and least-prepared teachers. Thus, veteran and new teachers work separately from each other, severely hampering the ability of new teachers to seek mentorship and informal assistance from their more experienced colleagues. Collaborative work cultures that allow teachers to learn from each other cannot root in such impoverished workplace conditions.

Meeting Professional Learning Needs of Teachers

Teachers feel that their current professional development activities meet certain curriculum and instructional needs, while poorly addressing others. Nearly three-quarters of participating teachers (73%) said that professional development focused on teaching methods tailored to their content area met their needs (Figure 6-3). Approximately the same percentage of teachers (75%) said that activities sponsored by subject matter professional associations were important to their professional growth. These results match other studies that found that when professional development is focused on teachers' specific content areas, teachers' needs are better met.[2] However, our data also reveal that much more support is necessary to meet teachers' other instructional needs. In implementing a new curriculum or instructional materials and in using educational technology, student assessment, or new teaching methods, half of all teachers feel their needs were met while the other half do not. These relatively low satisfaction rates illustrate the difficulty of meeting the broad spectrum of teachers' needs, particularly with large-group activities such as workshops that do not have focused follow-up.

Figure 6-3
Teacher Reports on Content of Professional Development Meeting Their Needs



* Percent of teachers rating 4 or 5, where 1=focus of professional development activities did not meet needs and 5=focus of professional development activities completely met needs.

Source: SRI statewide teacher survey.

In general, then, teachers do not believe that the professional development activities they participate in have a substantial impact on them. Half of all teachers responded that they received new information from professional development, a relatively low standard of impact, while 27% reported that they sought further information as a result of staff development, and 17% said that professional development changed their views of teaching. Even more revealing, one in five teachers think that the professional development they participated in was a waste of their time (Figure 6-4).

These reports, unfortunately, are in sharp contrast to the vision laid out by the California Professional Development Reform Initiative and the research on professional development discussed in the introduction to Part II of this report. This sobering portrait points to the general lack of effectiveness of professional development from teachers' vantage point. Overall, teachers face many options for staff development, but little of it is perceived as high in quality.

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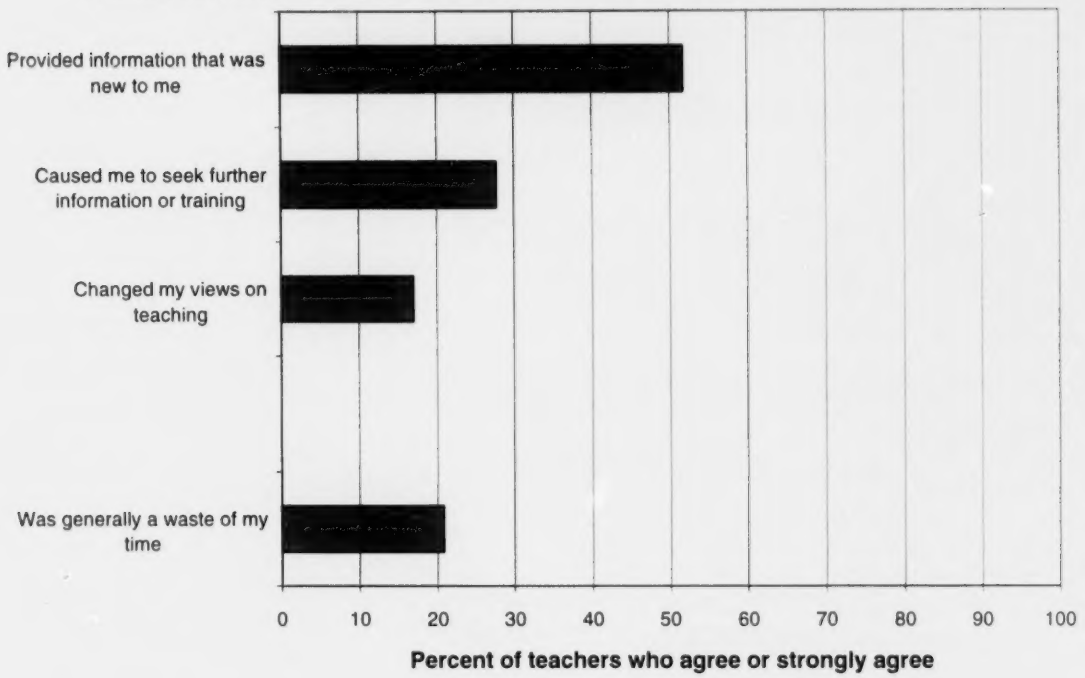
Figure 6-4
Teacher Reports on Impact of Professional Development Activities



Source: SRI statewide teacher survey.

It is noteworthy that teachers who do report high professional growth participate frequently in activities that are consistent with characteristics of high-quality professional development.

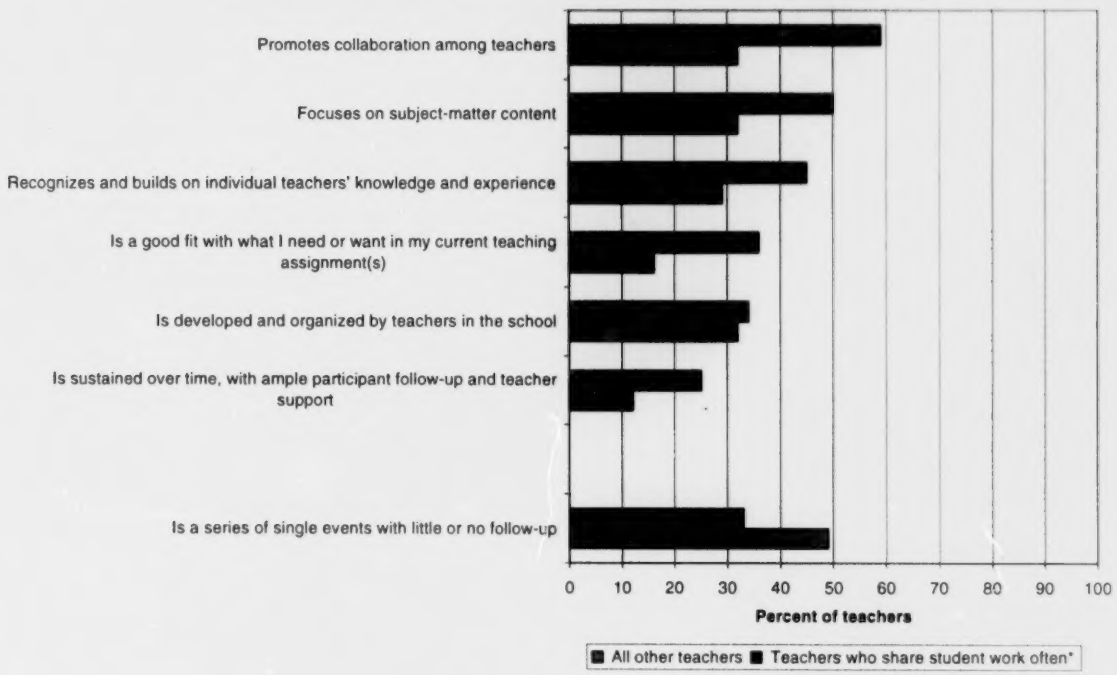
Impact of High-Quality Professional Development

Consistent with the design elements of the California Professional Development Reform Initiative, we found that teachers who frequently share student work, work together to develop curriculum materials, or observe each other's classrooms consistently report that their professional development experiences had a greater impact on them.

Specifically, teachers who often or very often share student work report that their professional development activities often promote collaboration, focus on subject matter content, and recognize and build on individual teachers' knowledge and experience. In addition, more than one-third of teachers who share student work (36%) report that their professional development activities are a good fit with what they need in their current teaching assignment,

compared with 16% of all other teachers (see Figure 6-5). The differences are also significant when we compare teachers who work together to create curriculum materials and all others, and those who observe each other and all others.

Figure 6-5
Prevalence of Certain Characteristics of Professional Development, Teachers Who Share Student Work Often vs. All Others


Promotes collaboration among teachers
Focuses on subject-matter content
Recognizes and builds on individual teachers' knowledge and experience
Is a good fit with what I need or want in my current teaching assignment(s)
Is developed and organized by teachers in the school
Is sustained over time, with ample participant follow-up and teacher support
Is a series of single events with little or no follow-up
0
10
20
30
40
50
60
70
80
90
100
Percent of teachers
All other teachers
Teachers who share student work often*

Scale: 1=never, 2=seldom, 3=sometimes, 4=often, 5=very often.
Percent of teachers reporting that PD activities reflected specific characteristic often or very often.
*Chi-square significant at $p<0.05$; contrasts on mean rating significant at $p<0.05$ on all items.
Source: SRI statewide teacher survey.

Although a minority of teachers have opportunities to share student work, write curriculum, or observe each other, these teachers report that participating in their professional development activities helped them increase their proficiency in specific instructional skills embodied in the CSTP, more so than other teachers do. Table 6-3 provides data for teachers who share student work that is also illustrative of data for teachers who write curriculum together and observe each other often.

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Table 6-3
Effectiveness of Professional Development on CSTP Skills, Teachers Who Share Student Work Often vs. All Others

	Mean Rating*	
Participation in professional development has helped me increase my ability to...	**Teachers Who Share Student Work Often****	**All Other Teachers**
Understand subject matter in sufficient depth and communicate that understanding to my students.	3.4	3.0
Help students to connect classroom learning to their life experiences and cultural understandings.	3.2	2.8
Use strategies that support subject-matter learning and language development for second language learners.	3.1	2.8
Engage students in problem-solving activities and encourage multiple approaches and solutions.	3.5	3.0
Help students accept and respect different experiences, ideas, backgrounds, feelings, and points of view.	3.1	2.8
Help students to internalize classroom rules, routines, and procedures and to become self-directed learners.	3.0	2.6
Develop and use a repertoire of instructional strategies well suited to teaching a particular subject matter.	3.5	3.0
Select and use instructional materials and resources that promote students' understanding of subject matter.	3.4	3.0
Use technologies to convey key concepts in the subject-matter area.	3.0	2.5
Plan to use instructional strategies appropriate to the complexity of the lesson content and student learning needs.	3.3	2.9
Ensure that student learning goals reflect key subject-matter concepts, skills, and applications.	3.4	3.0
Use assessment tools that are matched to and support my goals for student learning.	3.4	2.9
Engage in positive dialogue and interactions with families, and respond to their concerns about student progress.	2.9	2.3

* Scale: 1=not at all, 5=a lot.
**Contrasts on mean rating significant at $p<0.05$ on all items.
Source: SRI statewide teacher survey.

Below, we describe one of the school families (a high school and its feeder schools) funded through the Los Angeles Annenberg Metropolitan Project (LAAMP) as an example of sustained, subject-matter-focused professional learning. This LAAMP family is implementing a long-term

early literacy program in its elementary schools. The level of effort and resources gives teachers continued exposure and supports to put in place in the classroom what they learned in initial training outside of the classroom. Teachers report that the training is very useful and that they see some improvement in students' literacy.

Early Literacy in the Los Angeles Annenberg Metropolitan Project

The LAAMP family elected to train the elementary teachers in the California Early Literacy Learning (CELL) program. At a particularly proactive elementary school, a 3-year plan to train every K-3 teacher began in summer 1998. Each teacher attends 5 full days of training on interactive writing, guided writing, guided reading, shared reading, read-alouds, and literacy centers. During the school year, the teachers meet monthly in "critical friends" groups to share implementation strategies. They also have observed each other doing CELL lessons and observed teachers at another elementary school that started using CELL earlier. Teachers report that other weekly grade-level meetings are teacher led, supportive, and focused on looking at student work as it relates to content standards. One teacher received additional training to be an in-house coach, providing demonstration lessons and attention to new teachers. The teachers in this school reflect a serious commitment to this early literacy initiative, are confident that they are receiving the training they need to improve student learning, and are dedicated to helping each other be successful.

Understanding the Professional Development Experiences of California Teachers

California teachers have plentiful learning opportunities, yet only a minority of teachers view these opportunities as valuable and meaningful to their classroom teaching. A large majority of teachers report having time to collaborate with each other, yet only a minority focus the time to collaborate on student work and instructional issues. More teachers report having content-specific workshops than workshops focused on generic instructional techniques. Nonetheless, teachers report a general fragmentation of the time they spend on professional development, insufficient support for mentor teachers, and many professional development experiences that do not meet their needs in either subject matter specificity or level of teaching expertise.

Endnotes

[1] California Professional Development Reform Initiative. (1999, April). *Design for learning, California field guide for teachers' professional development—Draft.* Sacramento, CA: Author.

[2] Corcoran, T., Wang, A., & Foley, E. (1999). *What kinds of professional development build capacity better? An analysis of the impact of professional development on teaching practice in the school district of Philadelphia.* Philadelphia, PA: Consortium for Policy Research in Education.

CHAPTER 7. FINDING COHERENCE IN AN INCOHERENT SYSTEM

STATE POLICY

How does state policy support high-quality professional development?

- From the passage of SB 1882 in 1988, the state has launched a series of broad initiatives to support teacher learning.
- Most recently, state initiatives in reading and mathematics have infused even more dollars into the professional development system, although the reduction in time available during the school year has restricted local professional development activities.
- In combination with federal, private, and district initiatives, state professional development policies typically result in an incoherent and disconnected set of opportunities for teachers and schools.

DISTRICT SUPPORT FOR PROFESSIONAL DEVELOPMENT

How do districts support high-quality professional development?

- We identify three district approaches to supporting professional development that, in general, districts use in some combination: offering a wide menu of activities for individual teachers to choose from; developing a comprehensive school or district strategy in which all teachers are required to participate; and supporting collaborative, teacher-directed approaches.
- Whatever approach is taken, districts are challenged to interpret and navigate the flow of policies and directives from the state legislature in a coherent and efficient manner.
- Districts face similar challenges in developing sufficient expertise and capacity to provide all teachers with high-quality professional development opportunities.

SUPPORTS AND INCENTIVES

What supports and incentives are offered to teachers to encourage participation in high-quality professional development?

- Although most teachers receive some release time for professional development, finding time during the school day to reflect on and improve teaching strategies is a major challenge across the state.
- State policy that increased instructional days has made it harder for districts to build professional development days into the school calendar.
- Most teachers do not receive monetary supports, such as stipends, for participating in professional development, unless they are providing direct support to other teachers.
- Teacher evaluation is typically divorced from professional development and California's teaching standards.

The professional development opportunities of California's teachers fall far short of what they themselves perceive as sufficient and short of what research has shown to be effective in helping students learn to high standards. Why is this so? Our review of state and local policy demonstrates that policy-makers at every level of the system recognize the importance of professional development. Beginning with the state's comprehensive effort in the late 1980s to build a coherent system of professional development and continuing through the 1999 legislature's special session on education, California has actively supported a variety of professional development initiatives. These state initiatives exist alongside various federal, private, and local professional development opportunities available to districts and schools. In fact, the number and range of learning opportunities appear almost limitless.

Yet it is precisely the dizzying array of voluntary and mandated professional development opportunities that make it difficult for districts, schools, or teachers to formulate a coherent professional development strategy. Each program must be implemented in a limited amount of time, often by the same group of district and school personnel. Moreover, in many cases, the incentives for teachers to pursue meaningful learning opportunities and the resources available for them to do so turn out to be insufficient to motivate and to support high-quality professional development.

In this chapter, we illustrate the tension that districts, schools, and teachers face between reacting to existing and new state directives and sustaining sharply focused professional development strategies. We review the state policy context, beginning with the sweeping legislation on professional development in the late 1980s. We then describe various approaches that districts and schools take to mediate the space between state and federal mandates and local professional development needs. Finally, we examine the supports and incentives that the state, districts, and schools use to promote professional development.

State Policy in Support of Professional Development for California Teachers

The 1987 study *Staff Development in California: Public and Personal Investments, Program Patterns, and Policy Choices,* commissioned by the legislature, was sharply critical of most teacher professional development in California. It found that despite several promising activities, "On the whole…the current array of staff development activities and incentives is unlikely to yield substantial change in the thinking or performance of California's classroom teachers."[1]

In partial response to the publication of the 1987 report, the 1988 legislature passed a comprehensive professional development package under Senate Bill 1882. The legislation

established a three-tiered professional development strategy, including site-level projects, Regional Consortia, and the California Subject Matter Projects (CSMPs).

The first program of SB 1882 provided resources to schools and districts for planning and implementing professional development linked to improvement in curriculum, instruction, and assessment at about 300 selected high schools. The purpose of the program was to allow for better alignment of professional development activities with local teachers' needs and schoolwide goals. District entitlements are calculated on a formula of approximately $11.75 per student, based on average daily attendance (ADA) for all eligible schools.

The second program, the professional development Regional Consortia, was created to provide regional coordination, brokerage, and direct services to support the implementation of high-quality professional development at the local level. The goals of the Regional Consortia were to help schools and districts create, implement, and evaluate school and district development plans; facilitate collaborative learning agreements among school faculty; assist teachers in implementing the state curriculum frameworks; and build cooperative agreements between districts and institutions of higher education. Ten consortia were reauthorized for funding from 1995 to 2000.

The third and best-known provision of SB 1882 gave resources to institutions of higher education to deliver intensive subject-matter-based professional development. There are nine different Subject Matter Projects and approximately 100 different project sites throughout the state, which tend to be located on university campuses.[2]

A key feature of the CSMPs is regional summer institutes that last between 3 and 4 weeks. Other CSMP activities include weekend workshops during the school year, leadership academies, teacher action-research groups, and newsletters. All these activities focus on the pedagogy and content of each discipline area. They also support teachers' needs for collegiality and professional enrichment. The projects draw heavily on expert teachers as leaders to teach and support their colleagues.

Whereas evaluation data on the first two provisions of SB 1882 are thin, we know much about the progress of the Subject Matter Projects, which, according to our survey as well as previous work, reach more than one in five California teachers. CSMP activities are highly valued by its participants, again according to our work and the work of others.[3] Still, in combination, the three provisions of the law did not result in anything like a comprehensive system of professional development. In fact, the 1998 reauthorization of the Subject Matter

Projects explicitly directs the projects to move away from a focus on individual teachers aside from their school and district contexts.

Professional Development Initiatives in the Wake of SB 1882

In spite of its goal of serving as the basis of a comprehensive system of professional development, SB 1882 was followed by numerous state initiatives designed with various purposes in mind. One telling example was the combined effort of the Mathematics Renaissance and the California Science Implementation Network, which were launched in the late 1980s and early 1990s. Together, these measures were designed as part of a systemic strategy to implement the California frameworks in mathematics and science.[4] These were quite successful efforts in terms of their reach—tens of thousands of teachers—and their impact, with clear impacts on student learning. In this context, they are notable because they functioned as a parallel effort to the work of the Subject Matter Projects in science and mathematics—except they were under the control of the State Superintendent of Instruction and not the University of California. These programs exemplify how policy-makers can duplicate efforts and build numerous, differently funded, and competing efforts to support teachers.

Through the 1990s, older programs, such as the Bilingual Teacher Training Program, continued, and new ones, like SB 1274 grants to restructure schools, supported professional development for teachers throughout the state. Taken individually, each of these efforts had clear merits. Yet, together, they did no more than SB 1882 to build a more coherent statewide system for supporting teacher learning.

Recent Professional Development Initiatives

During the past few years, the legislature has also added funds to the state budget for professional development in reading and mathematics in an attempt to raise the test scores of the state's students. In addition, other recent legislative initiatives have implications for teachers' opportunities to learn. We review these key initiatives below.

Reading Instruction Development Program. AB 1086 (1997) provided $56 million to expand the Teacher Reading Instruction Development Program for grades K-3 and created similar programs for teachers in grades 4-8.[5] This legislation also required the State Board of Education, in consultation with the Commission on Teacher Credentialing, to develop a list of approved contract providers of training in reading instruction. ABX1 2 (1999) provides for another $75 million to establish the Elementary School Intensive Reading Program. The funds support "multiple, intensive reading opportunities for pupils in [K-4]" and "give first priority to

increasing instructional opportunities for pupils who are experiencing difficulty learning to read."[6]

Reading Professional Development Institutes. Under ABX1 2, passed in 1999, the legislature requested that the University of California, along with partner CSU sites and independent colleges and universities, develop and execute reading professional development institutes for up to 6,000 teachers. The legislation directs that the training be consistent with the Reading/Language Arts Framework and include the instruction of explicit reading skills; a strong literature, language, and comprehension component; ongoing diagnostic assessment; and early intervention techniques.

Mathematics Professional Development Grants. In addition to the increased funding available for reading, the 1998 Budget Act provided $28.5 million for staff development in mathematics for teachers in grades 4 to 12. AB 2442 provides approximately $14 million in grants to local districts to reimburse teachers for fees and materials arising from taking college and university mathematics classes. AB 1331 provides another $14 million in grants for in-service training in mathematics. The professional development providers are specified through an approved list, similar to the provisions of AB 1086 in reading.

Elimination of "Noninstructional" Days. Beginning in 1977, the state had authorized and funded districts to include up to 8 noninstructional days in the school-year calendar. Most districts used 4 or 5 of those days for professional development. The 1998-99 budget stipulated a minimum of 180 instructional days for students, effectively eliminating all staff development days within the teacher contract year. The 1998 budget act appropriated $195 million to fund up to 3 days of staff development at $270 per day for certificated staff and up to 1 day at $140 per day for classified staff. Because these pupil-free days cannot replace any days within the 180-day instructional year, districts must extend the school year beyond the 180 days for which teachers are contracted to implement any of the staff development days. Teachers and administrators argue that this legislation further exacerbated schools' difficulties in supporting teachers' professional development. At the very least, the legislation forces schools and districts to change the ways in which professional development is scheduled.

California Peer Assistance and Review Program (PAR). ABX1 1 emerged from the 1999 special legislative session and established the California Peer Assistance and Review Program (PAR). PAR seeks to create "a critical feedback mechanism that allows exemplary teachers to assist veteran teachers in need of development in subject matter knowledge or teaching strategies, or both."[7] PAR will become fully operational on July 1, 2001, when it will completely displace the California Mentor Teacher Program. Funds received under PAR may be

used for BTSA, pre-intern programs, district intern programs, and other professional development.

Public School Performance Accountability Program. The special legislative session of 1999 further established the Public School Performance Accountability Program, under which, among other provisions, 430 schools scoring below the 50th percentile on the Standardized Testing and Reporting (STAR) program would be "invited" to participate in the Immediate Intervention/Underperforming Schools Program. In 1999, the first year of implementation, more than 430 schools volunteered to participate. Participating schools will receive $50,000 as a planning grant to assess their weaknesses and design a plan of action to improve student achievement.

Issues in Understanding State Support for Professional Development

These many state professional development initiatives provide needed resources to districts and schools to address important goals—like increasing reading achievement. At the same time, they can also restrict local efforts, increase the burden on local educators as they seek to follow state guidelines, and, in combination with myriad federal and privately sponsored initiatives, make it difficult for districts, schools, or teachers to formulate a coherent professional development strategy.

The task of interpreting the policies flowing down from the state legislature and implementing the directives in some coherent and efficient manner is made more difficult by the noninstructional nature of some mandates. An examination of Elk Grove's catalogue illustrates that, even for this progressive district, the menu of staff development courses is studded with a host of noncurricular, noninstructional topics, including:

- Illness and Injury Prevention Program, Hazardous Materials, and Blood Borne Pathogens training for new employees.
- CPR/Community First Aid & Safety and CPR Recertification.
- Mandatory Child Abuse Workshop for new teachers.
- How to Develop and Implement 504 Plans for Students.

Although each of the mandated professional development topics addresses important social and educational problems, the requirement to offer these and other workshops to remain in compliance with state policies fractures teachers', schools', and districts' concentration on student learning and consumes valuable time and financial resources. One principal expressed her struggle in focusing on instructions: "If policy-makers were all focused on student achievement, that would be fine. Just focus on that. But there are 10 new things that have came

up in the last year. We are supposed to be instructional leaders, but the pie of my time keeps getting sliced up. The piece for instruction is only a small piece." At the same time, the state picture changes so rapidly that districts must sprint to catch up with all the mandates. "The messages coming from [the state] have been so chaotic and inconsistent...." This assistant superintendent for curriculum and instruction continued, "The message from [the state] changes on a monthly basis. We don't really know how to respond...we are left on our own."

The lesson for state policy-makers is that the influence of any individual state policy must always be considered in the context of what is already asked of districts, schools, and teachers. Constructive state efforts to promote teacher learning—providing sufficient resources, creating model programs, setting overall priorities, tapping the expertise of the state university systems—can be undermined when combined with restrictive mandates or new programs that are simply layered on existing efforts. In essence, the state cannot mandate what really matters: coherent and effective learning opportunities for all teachers. The success of state initiatives will always turn on the actions and will of local educators. The state can provide the resources, the focus, and the motivation; however, it can also inadvertently create confusion and lessen the likelihood that California teachers will develop the skills and knowledge needed to bring all students up to the state standards.

District Support for Professional Development

In the face of the vast universe of professional development options, districts seek to develop a coherent and strategic approach to teacher learning. In fashioning a strategy, districts and schools make a series of choices regarding professional development, including (1) the content, (2) the source of expertise, and (3) the participants. Separate from these issues is the question of who makes the decisions for each of these questions. Strong leadership and explicit goals and incentives can result in more centralized decision-making at the school or district level. A very decentralized system allows teachers to be the main arbiter of their own professional growth activities. It is through making these decisions that districts and schools choose to respond to state initiatives.

In our case study districts, we found a wide range of district activities designed to provide teachers with multiple learning opportunities. In each site, districts faced the daunting task of identifying professional development priorities, interweaving appropriate state goals and resources, and covering other, unrelated state mandates. The following examples illustrate how schools and districts attempt to create coherence out of state directives, teacher needs, disparate flows of monetary resources, and unconnected incentives and supports.

Menu Approach

One common district approach is for the central office to provide a broad array of workshops, presentations, and seminars for teachers to choose from. An important goal of the menu of offerings is to provide something of interest to everyone. In a menu approach, the central office distributes a catalogue of staff development activities for teachers to choose from, thus acting as a clearinghouse of activities, resources, and expertise. The menu is also the way districts can efficiently cope with all of the noninstructional state mandates, such as CPR and hazardous-materials training.

The professional development activities vary widely. Entries in a typical catalogue from one case study site included such workshop titles as "Speed Reading," "Fall Art Docent Training," "Ways to Improve Your Existing Units with Innovative Strategies and Resources," "Beginning Spanish," and "Memory Mastery." At another district, the curriculum and technology professional development calendar included "Using Online Resources in Elementary Science," "NuCalc," "Using Internet Search Skills," "Creating and Using Excel Spreadsheets," "Using Primary Resources in California and U.S. History: the California Heritage Project," and "Geometer Sketchpad." In addition, professional development activities covered both topics that cut across content areas, such as classroom management or working with special populations, and those specific to grade levels and content areas, such as teaching time and calendar concepts in K-2.

Under the menu approach, the district identifies the needs to be addressed and selects the sources of expertise, whether district curriculum specialists, external experts, or full-time classroom teachers. But it is the teacher who makes key decisions about which topics to seek out and how much time to spend on such activities, since participation is largely voluntary.

A menu approach is usually an insufficient vehicle for improving teaching practice in specific areas of instructional need, because the emphasis is on something for everyone. In at least three case study districts, administrators stated that they wanted to reduce the number of workshops and topics on the menu and increase the focus on specific instructional or student learning goals. To the extent that the menu approach is maintained to cover the extraneous state requirements, teachers face an incoherent set of offerings and choices.

However, a menu approach can supplement a more targeted professional development strategy, as in the case of Elk Grove. The example of Elk Grove Unified School District, in a fast-growing suburb of Sacramento, illustrates how a tailored menu approach can signal district priorities. In this case, the professional development office ties the menu of choices into district instructional priorities through an elaborate incentive structure. District administration augments

the salary schedule such that credits for the top steps can be earned only through designated workshops focusing on specific content areas. Credits toward the second-highest step are available for workshops focusing on English, math, science, or social studies. Teachers attain credits for the highest step, introduced just 2 years ago with the simultaneous launch of a reading initiative, for workshops related to early literacy, reading for information, and reading across the content areas.

Thus, the selection of workshops and seminars is coupled with financial resources and teacher incentives to reflect the district's goals. For these targeted areas, the professional development activities are somewhat more sustained than a typical menu approach. They are less often one-shot workshops and more often a series of three or four seminars spaced apart to allow for some follow-up over the course of the series. In the case of the literacy initiative, the reading courses reinforce and complement more intensive staff development that includes literacy coaches and reading specialists who work with teachers in the schools, through coaching, grade-level meetings, and, to a limited extent, demonstrating and observing lessons. However, even with a more streamlined menu approach, central office staff admit that "some folks miss the mark and just focus on moving up the salary steps."

Comprehensive School and District Strategies

In addition to offering broad-based professional development menus to teachers, several districts had developed and sustained a comprehensive professional development strategy around very specific instructional focuses. We present several contrasting examples—ones where state policies happened to support district goals and plans already in place, and others where professional development based on local needs flourished with little relationship to state policies.

The first two examples are Selma Unified School District in the Central Valley, near Fresno, and San Diego Unified. Selma has placed a long-term, strategic focus on early literacy. Beginning more than 5 years ago, Selma redirected half of its Title I resources to a new reading initiative. Accessing high-quality external expertise to build internal capacity, Selma contracted with outside reading experts for three consecutive summers. In addition, the district supported a 1-year training of a full-time district reading specialist through a partnership with the local university, CSU Fresno. The district specialist then trained several school-based teacher leaders. The full-time specialist, a local external consultant, and the teacher leaders have thus far trained 22 Selma teachers, who spend half of each school day working with students. This capacity is sufficient for all first-grade classes to have access to the program and for each elementary school to have at least one trained teacher. Selma intends to continue expanding the program so that enough teachers are trained to support students in all the primary grades. Training for

kindergarten to grade 2 teachers consists of 2 days with an outside expert, with a focus on assessment. Monthly grade-level meetings, led by the cadre of local teacher leaders, reinforce and deepen the initial training. In addition, upper elementary teachers work with the local consultant on using assessment to make instructional decisions and using a small-group approach to better customize instruction to students' needs.

San Diego Unified School District likewise has an aggressive implementation strategy targeting literacy. Importing key elements of the literacy program used in Community District 2 in New York City, where the current San Diego Chancellor for Instruction was the superintendent, San Diego has restructured the central office, redirected resources to support professional development for teachers, and made principals accountable for instruction in their schools. The district established the Institute for Learning, which houses a cadre of instructional leaders whose job it is to train and support teachers in literacy instruction. Instructional leaders work directly in classrooms with teachers and lead after-school and weekend workshops. All principals are expected to spend 2 hours each day in classrooms to help their teachers improve instruction. The district further mandated a daily 3-hour block for literacy in every elementary school.

In both the Selma and San Diego examples, the strategic direction and key decisions about resources, structure, capacity, and content of the training are set at the top of the district system. In both cases, California's Reading Initiative supported these districts' professional development strategies through financial resources and statewide training opportunities. Both took advantage of AB 1086 dollars to provide additional professional development opportunities—but they did so in a way that fit state resources and support into their ongoing initiatives. San Diego, for example, used AB 1086 dollars to support professional development from a state-approved external provider in one strand (Word Study) of a multiple-strand balanced literacy program. District and other external funds were used to support professional development in the other strands. In neither San Diego nor Selma did the district leadership simply "implement" a state policy. In fact, the strength of their approach was in adapting state policy to local needs—which were consistent with basic state intentions. Selma and San Diego already had in place structures that allowed them to take advantage of the extra resources provided by the state. Thus, these two districts did not have to alter their focus and attention to incorporate the direction from the state.

Teachers Directing Their Own Professional Development

In two other examples, we illustrate district approaches that are teacher driven, collaborative, and sustained. It is interesting that these alternative approaches matured in the absence of directly related state policies and indeed are sustained in spite of the fragmentation and disparate pressures applied by various state initiatives.

Inquiry groups in the Santa Monica-Malibu Unified School District exemplify teacher collaborative groups directing professional development. The inquiry groups, funded externally by the Los Angeles Annenberg Metropolitan Project (LAAMP), involve teachers, administrators, and, in some instances, students working together to solve specific problems. The inquiry groups complement the district's move toward site-based management and constitute Santa Monica's primary professional development approach. Although voluntary, the inquiry groups have drawn in almost 100% of all elementary teachers in Santa Monica, approximately 70% of middle school teachers, and 65% of high school teachers. Through a long-term alliance with Center X at UCLA, the district has identified the inequitable learning opportunities between Caucasian and minority students as the single most pressing issue facing the district, and expects the inquiry groups to address this issue in their own ways. Inquiry groups consist of 8 to 12 people who meet for 2 to 3 hours every 2 weeks, generally during school hours. A trained "critical friend," usually an external consultant, facilitates these structured discussions, which are designed to promote self-reflection on instructional practice.

Unlike the finding from the 1987 report that teachers have little influence over decisions regarding their professional development, the participants in the inquiry groups direct the activities. The degree to which the inquiry group is action oriented rather than limited to discussion depends on the group participants themselves. In one strong example, the inquiry process precipitated an overhaul of the math program at one middle school so that all students could take algebra. The planned overhaul included:

- A review of the math courses and math instruction at the middle school and feeder elementary schools.
- A summer working group with guidance from a UCLA professor and access to the California Math Project at Center X to research different approaches to organizing and teaching math.
- Rewriting of the math curriculum.
- Adoption of new textbooks.
- Development of criteria for elementary math programs.

In this example, teachers working together developed a plan of action, identified the reforms needed, located appropriate external expertise, built internal capacity to institute change, and had control over resources to execute the steps of the plan. Teachers saw the work of reforming the curriculum so that all students would have the opportunity to learn algebra as part of their instructional responsibilities.

One elementary school in Elk Grove Unified embarked 3 years ago on Results, a program that is now associated with the California Reading and Literature Project, emphasizing the analysis of student data to drive instructional decision-making. Adoption of the initiative grew organically, beginning with a reading specialist at the school who independently sought out external training. With support from her principal, she instituted training for teachers at the school on a voluntary basis. Teachers select and administer a variety of reading diagnostic tests, meet in grade-level groups weekly to examine the assessment results, and plan, as a team, instructional strategies based on their analyses. Teachers at the school describe Results as a "philosophy, not a curriculum" and point to after-school programs designed for the lowest-performing students as tangible reforms flowing from a paradigm of basing instructional decisions on the analysis of assessment results. Novice teachers at the school report that participating in the Results discussions has given them concrete assessment skills that have improved their sense of efficacy in the classroom. "Results is a great thing for a new teacher because it gives you ready assessments, and new teachers are looking for something to guide them."

In this example, professional development takes the form of collaborative, problem-solving discussions and analysis that lead to specific, action-oriented goals. Teachers testify to its profound influence on their teaching: "Results...allows us to do small-group instruction and is focused on what individual kids know and can do. It is powerful because of its focus and the information it gives. Once you do the assessment for the second time, you understand and can't imagine ever doing without it. I can't image teaching another way." Much of the power of the Results work seems to be associated with the shared responsibility of teachers at the same grade level. "It has to be a team effort. We teach each other's kids, rearrange groups, and give suggestions for teaching strategies with kids that are not making it. It leads to powerful discussions. ... Our mantra is 'Every child a reader and every child a name'." Teachers in the lower grades in this school made it clear that their most powerful professional development occurred through everyday interactions with their colleagues as they discussed the students' progress—it was not an adjunct activity.

Like the examples of Selma and San Diego, Elk Grove's and Santa Monica's approaches to professional development demonstrate the core role of the district in affording teachers coherent learning opportunities. It was in part because of the success of Results in local districts like Elk Grove, in fact, that the Subject Matter Projects adopted it statewide. Here we have an example of local efforts influencing statewide policy.

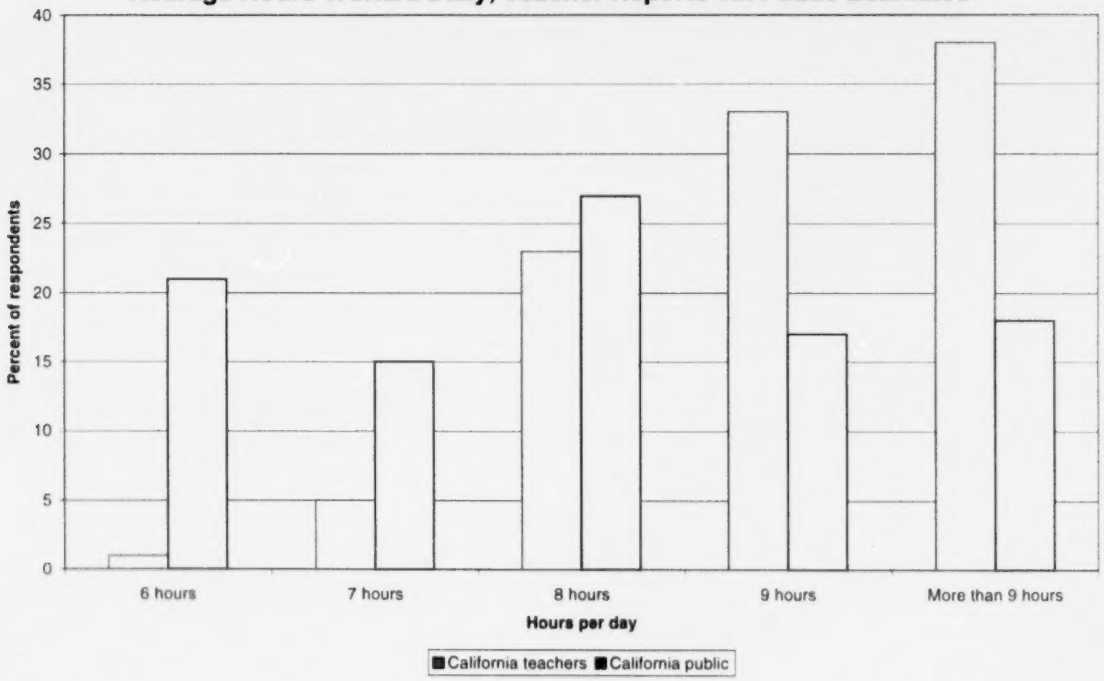
Supports and Incentives for Professional Development

Regardless of the programs and strategies that the state, districts, and schools create to support professional development, core decisions about what teachers participate in and how seriously teachers pursue opportunities lie in the hands of the teachers themselves. Thus, much of what policy-makers can do to promote quality professional development turns on the supports and incentives they offer individual teachers. Supports and incentives signal the priority that schools and districts place on different activities. Here, we discusses the system of supports and incentives for teachers' participation in professional development. We address the issues of time, rewards, and evaluation.

Time for Professional Development

Teachers work long hours. Overall, California teachers report working on a variety of tasks outside of their regular contract day, many of which help build their professional skills and knowledge. The vast majority of teachers report working more than 8 hours per day (Figure 7-1). Thirty-three percent work 9 hours and 38% work more than that each day. Public perceptions of the teaching profession generally err on the side of underestimating the workload of teachers.[8] Thirty-five percent of the California public estimate that teachers work more than 8 hours a day, but equal percentage (36%) estimate that teachers work less than 8 hours. Even though the public holds misconceptions of teachers' workloads, 82% believe in compensating teachers more for professional development and planning.

Figure 7-1
Average Hours Worked Daily, Teacher Reports vs. Public Estimates



Source: Estimates by California public from RNT (1999); California teacher data from SRI statewide teacher survey.

Time for professional development, then, either has to be inserted into an already crowded schedule or, worse, added on top of teachers' other responsibilities. Almost two-thirds (63%) of teachers received release time for participating in professional development (Table 7-1). However, fewer than half of all teachers (46%) had scheduled time for collaboration with other teachers, and only 38% had scheduled time for such activities during regular school hours.

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Table 7-1
Time for Professional Development

Time Provided Teachers in 1997-98	Percent of Teachers
Release time from teaching (i.e., when your regular teaching responsibilities are covered by someone else)	63
Scheduled time for collaboration with other teachers, including your regular planning period if it is used for this purpose	46
Scheduled time in the weekly master schedule for pupil-free time (i.e., time for professional development built into your regular schedule)	38

Source: SRI statewide teacher survey.

Teachers and district personnel whom we interviewed for the case studies generally anticipate even less time for professional development as a result of the elimination of "noninstructional" days. As mentioned earlier in this chapter, the 1998-99 budget stipulated a minimum of 180 instructional days for students, effectively eliminating all staff development days within the teacher contract year. Teachers and administrators across the state complained about the reduction of the state-funded instructional development days. "We used to have up to 7 days of in-service, but not with the new bill. It's got to be either before or after school," explained a high school administrator in a rural district. "The value of having 1 or 2 days before school is very questionable in my mind, but that is our only alternative right now." In addition, the difficulties of scheduling time for teachers' professional development were exacerbated when the statewide implementation of class size reduction significantly reduced the pool of substitutes.

In an attempt to provide models of creating time for professional learning, the California Professional Development Reform Initiative (CPDRI) summarized some possible strategies:

- Purchasing time, such as release days, summer stipends, or adding days to the contract.
- Reallocating time, such as expanding staffing with substitutes and part-time teachers; flexible classroom coverage by teaching assistants, interns, or team teaching; alternative scheduling, such as common prep time, block scheduling, banking time; reducing teacher workload/student contact time.
- Improving the use of time during staff development days and faculty meetings.[9]

CPDRI notes that these solutions have their drawbacks. Purchasing time tends to be "one-shot" rather than ongoing. Reallocating time is nearly impossible, as we have noted, in districts with

teacher shortages because few substitutes are available. Flexible coverage is a temporary strategy and cannot free teachers for long periods of time.

Some schools and districts are already implementing some of these suggestions and have developed other ways of building in time for teacher learning. For example, Selma Unified has each Tuesday as an early release day for pupils, allowing teachers an hour and 45 minutes for professional development (but the other four days of the week have slightly longer hours). One Tuesday per month is reserved for BTSA mentors and mentees to meet. Another Tuesday per month is used for grade-level meetings, which bring all elementary teachers in the district together. At the junior high, the early release days are used for team meetings. At the high school, Digital High School training occurs twice per month and department meetings once per month.

In another example, a San Francisco middle school moved to block scheduling. Every teacher has two prep periods per day, and teachers meet every day. The principal believes, as do the staff, that communication is crucial to developing expertise within the school. In this school, teachers have common planning time within their interdisciplinary families, as well as in vertical departmental teams. A veteran teacher told us, "I love this school because teachers have common planning time, time to talk to each other. There is a lot of collaboration here because of the [interdisciplinary] families; there is a lot of interaction over student learning."

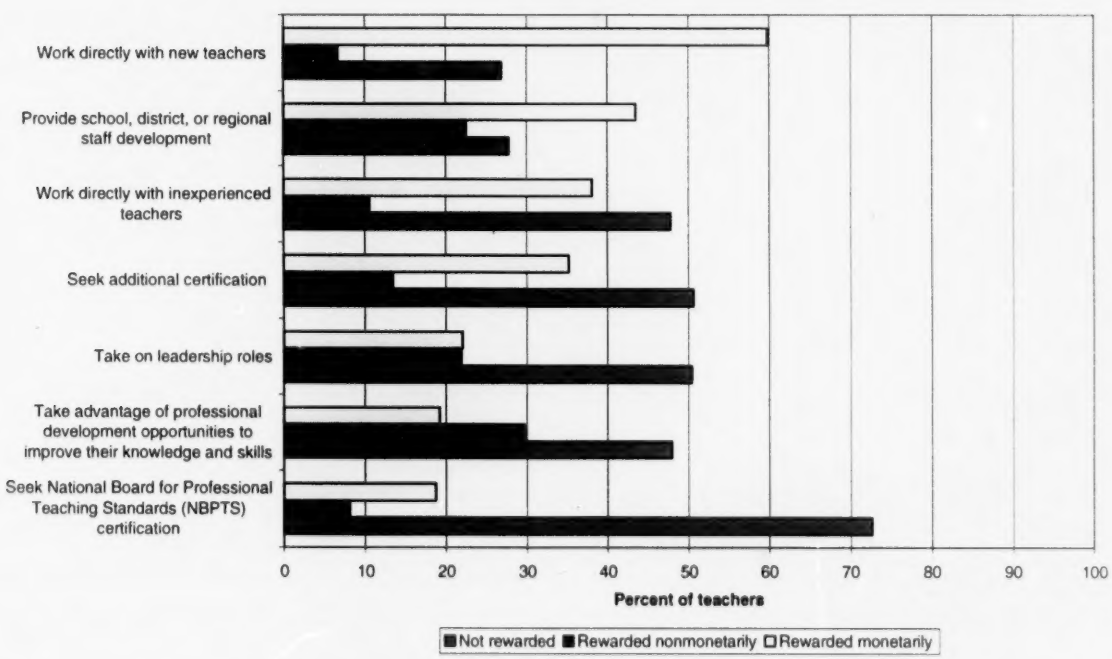
San Diego has taken a different approach to affording teachers professional development time by placing staff developers in schools 2 to 4 days per week. These peer coaches work directly in teachers' classrooms, modeling lessons, observing, and offering critical feedback. But they also take over teachers' classes to allow those teachers to observe in others' classrooms. Thus, professional development time takes place during the regular daily schedule.

In the absence of such integrated approaches, professional development time becomes fragmented as activities are fit into the small periods available, resulting in unsustained and shallower focus on the content of professional development activities. As one administrator expressed: "Time! As a system we just haven't been able to organize time in ways that support professional development. It will take a radical reconceptualization of the way we think about a school year." In addition, there are serious time constraints on the planning and development of professional development. As one teacher reported: "There's a PD committee that includes teachers and administrators that tries to come up with things. But the PD is not well focused, not in-depth. It's all flavor of the month. It's not well thought out because it's developed in teachers' spare time. I've given in-services...and I know that it has to be developed at lunch, after school, off-track. There's no time in the schedule for it."

Rewards for Professional Development

Another way districts can support teachers is by providing them certain benefits for professional-development-related activities. The types of rewards districts can offer are influenced by state policy. For example, because of funds available through the California Mentor Teacher Program and BTSA, a large percentage of teachers report being rewarded monetarily for working with new teachers (Figure 7-2). Much lower percentages of teachers report getting either monetary or nonmonetary benefits for other relevant activities. Strikingly, fewer than half of teachers who provide direct professional development to their peers or take on leadership roles are paid for it. At minimum, this suggests to those teachers that professional development is not an expectation of their job; at worst, it acts as a disincentive to pursue professional development, given the scarcity of time, and to pursue those things that are rewarded.

Figure 7-2
School/District Rewards for Teacher Development Activities



Source: SRI statewide teacher survey.

In the worst-case scenario, teachers are not only not rewarded but are expected to spend their own money on their professional development. As Table 7-2 illustrates, 66% of teachers spend more than $50 per year on their own professional development, and almost 40% spend more than $250 per year.

Table 7-2
Teachers' Expenditures on Professional Development

Amount Spent in 1997-98 School Year	Percent of Teachers Spending Amount on Their Own Professional Development
None	21
Up to $50	13
$51 to $100	12
$101 to $250	15
$251 to $500	17
More than $500	22

Source: SRI statewide teacher survey.

Evaluation as Professional Development Tool

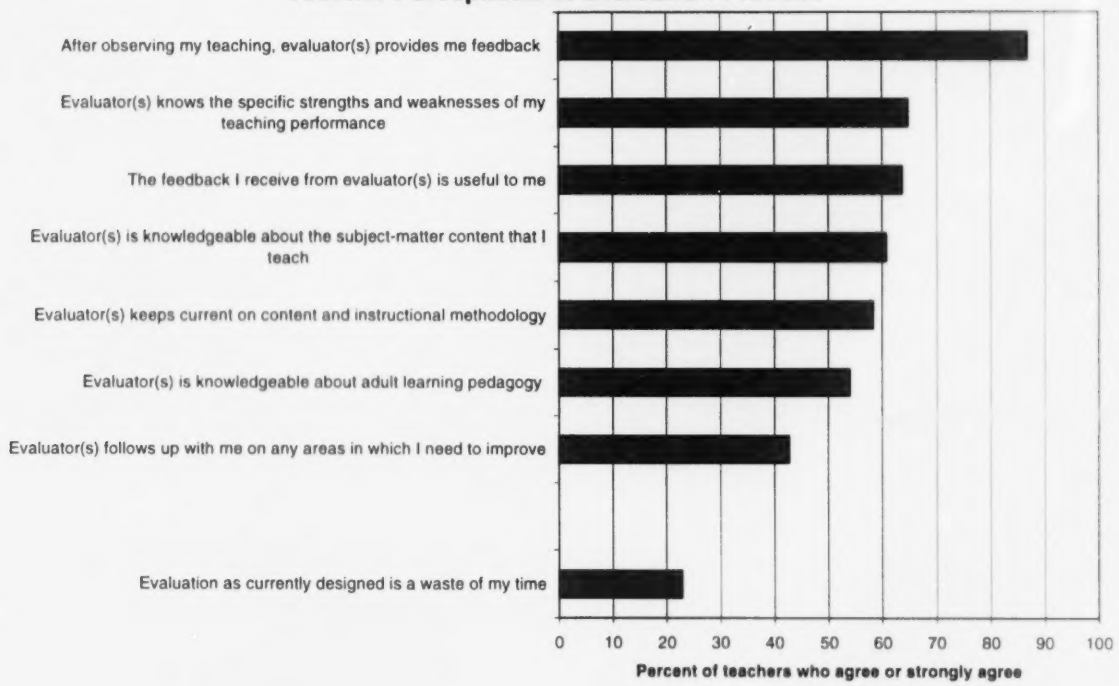
In theory, evaluation can play a critical feedback role for teachers. If teachers are evaluated relative to a set of standards or professional goals and provided appropriate feedback, the results of this process can be used to fashion an individualized professional development plan. In practice, however, teacher evaluation systems as they are currently constructed are usually pro forma. Typically, new teachers with preliminary or clear credentials have probation status for the first 2 years of employment with a district. Their administrators formally evaluate them at least once each year. In many schools we visited, administrators chose to evaluate them twice in the first year or informally evaluate them more frequently. Schools are required to evaluate teachers with tenure biennially.

The entire evaluation process includes conferencing, observation, and culminating in written documentation of teachers' performance. Generally, administrators do a preconference with the teacher to discuss the lesson to be observed—the objectives, relationship to the previous and subsequent days' lessons—followed by the observation and a postconference. In the schools we visited, teachers and administrators described the evaluation forms they use as bubble forms

with satisfactory or unsatisfactory types of ratings along various dimensions, which usually are unrelated to the California Standards for the Teaching Profession.

Between 1996-97 and 1997-98, almost all teachers (96%) in our survey sample were observed at least once for evaluation, including 59% who were observed two to three times and 17% four or more times. Almost 90% of teachers received feedback after being observed for an evaluation, but only 64% found that feedback useful, and even fewer (43%) reported that their evaluator followed up with opportunities for professional development (Figure 7-3).

Figure 7-3
Teacher Perceptions of Evaluation Process


After observing my teaching, evaluator(s) provides me feedback
Evaluator(s) knows the specific strengths and weaknesses of my teaching performance
The feedback I receive from evaluator(s) is useful to me
Evaluator(s) is knowledgeable about the subject-matter content that I teach
Evaluator(s) keeps current on content and instructional methodology
Evaluator(s) is knowledgeable about adult learning pedagogy
Evaluator(s) follows up with me on any areas in which I need to improve
Evaluation as currently designed is a waste of my time
0
10
20
30
40
50
60
70
80
90
100
Percent of teachers who agree or strongly agree

Scale: 1=strongly disagree, 3=neither agree nor disagree, 5=strongly agree
Source: SRI statewide teacher survey.

In schools with high turnover, administrators are overwhelmed with heavy evaluation loads, and veteran teachers reported in interviews that administrators may complete their evaluation forms without observation and discussion. In these instances, the evaluation process itself does not yield information useful to the teachers. Thus, overall, evaluation as a system is not used to further teachers' professional development. While it consumes valuable time, more than 30% of teachers do not think the feedback is useful. Over half report that their evaluators

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do not follow up with them regarding needed improvements, and almost one-quarter think evaluation is a waste of time.

There are, of course, exceptions to these general trends. To improve on the standard evaluation process, some schools use individual plans that are intended to guide professional development choices and link evaluation and professional development. In one middle school in Elk Grove Unified, all teachers are required to meet with an administrator (principal or assistant principal) to develop a professional development plan. Each teacher then must submit a portfolio that demonstrates progress toward annual professional development goals. The administrators review and provide feedback on the portfolios each year, even for veteran teachers. Administrators and teachers alike report gaining more valuable information from this process than through the district-required evaluation form. Unfortunately, the school must comply with the standard process, in addition to its own system, even though the standard process is less useful for both teachers and administrators.

Santa Monica-Malibu Unified has an innovative districtwide evaluation system (described below). Tenured teachers have two options: the regular 2-year evaluation cycle or a 3-year professional growth cycle that includes setting goals and submitting evidence of achieving the goals.

Teacher Evaluation in Santa Monica

In the first year, Santa Monica teachers are observed three times, the third of which is a formal evaluation, usually performed by the principal. For teachers with satisfactory evaluations the first year, there are no formal evaluations in the second year. (However, new teachers may be observed and given informal feedback by the principal.) If the teacher did not get a satisfactory evaluation the first year, then the Year 1 process is repeated the second year. In the third year, a new teacher who was successful in the first 2 years gets tenure. All teachers get their choice in the third year of the cycle to either repeat the process described above or to enter a "3-year professional growth cycle." A teacher who chooses the professional growth cycle develops a plan for what he or she wants to do over 2 years and submits it to the principal. The teacher then follows the plan, taking courses, reading, taking professional development offerings in areas of interest (e.g., interacting with a community and families served, National Board certification, and so on). At the end of the fourth year, the teacher submits a portfolio or other evidence of professional growth for the principal to assess. If satisfactory, there is no evaluation in the fifth year of the cycle. Then the cycle starts again with Year 1 of the 3-year professional growth cycle.

These uses of evaluation to support professional learning goals are the exception. In general, teacher evaluation systems in our case sites were divorced from professional development and were not tied to teaching standards. However, the legislative mandates under Peer Assistance and Review (ABX1 1) could change local evaluation procedures.

Teachers participating in PAR are expected to have individual improvement plans, and districts and schools will have to provide appropriate staff development and support for teachers to progress toward their improvement goals, most notably the assistance of an exemplary "consulting teacher." Further, the bill amends existing law to require school district governing boards to evaluate certificated employee performance as "it reasonably relates to" the progress pupils are making toward meeting state standards, as measured by "state adopted criterion referenced assessments." In addition, the CDE will provide guidelines on how to develop local PAR programs that are based on the CSTP and the NBPTS. The final evaluation results of a teacher's participation in PAR will become part of the teacher's personnel file.[10] Although these provisions may improve the usefulness of the evaluation process for participating teachers, it is unclear how many teachers will actually participate, given the capacity constraints of enough master teachers, mentor teachers, BTSA support providers, and now consulting teachers.

The Challenges of Coherence and Capacity in Professional Development

The state, districts, and schools face two fundamental challenges in ensuring that all teachers have access to high-quality professional development: (1) sustaining a consistent and coherent vision, goal, and strategy for instructional reform over a long period of time; and (2) the scale of the human and financial resources necessary to support instructional improvement over the long term in multiple subjects and multiple grades.

At each level of the system, the coherence of teachers' professional development opportunities is a key issue. At the state level, various pieces of legislation do not attempt to coordinate the disparate approaches to professional development, nor do they effectively ensure that the quality of professional development will be high. Yet they are increasingly prescriptive. "The fragmentation of funding sources is a major problem. It leads to creating a situation where the amount of local discretion is the smallest it's ever been, while the dollar amounts are the largest. We are told very specifically how to spend those dollars," stated another superintendent.

Regardless of state policy, however, districts shoulder some responsibility for making sense of competing mandates and providing professional development opportunities for teachers that make sense in the district context. Our case study districts provided examples of how strong local leaders can do much to develop coherent approaches. Elk Grove, for example, uses a series

of incentives to encourage teachers to take advantage of opportunities in line with district objectives. San Diego has built of system of peer coaches and a literacy focus, taking advantage of state resources.

School leaders also have a role in helping to forge professional development that makes sense for their teachers. In Santa Monica, there has been an explicit effort to build school-level capacity, shared among the principal and teachers, to make sure that teachers have learning opportunities that meet their particular needs.

In the absence of a coherent message from policy-makers at each level of the system about the importance and direction of professional development, teachers' learning experiences will too often be fragmented and incoherent themselves. More importantly, disjointed and contradictory policies can lead teachers to begin to ignore policy-makers' reform initiatives and take a "this too shall pass" approach to urgent efforts to improve our schools.

A related challenge at each level of the system is building sufficient capacity to implement high-quality professional development for all teachers. Simply put, helping teachers learn requires many helpers—other adults who are prepared to help teachers improve their practice. The numbers involved, if all teachers are to be reached—are startling. For example, San Diego Unified created more than 100 school-site staff developer positions—at a cost of millions of dollars—to ensure that teachers receive adequate support in the classroom during the instructional day. All of these dedicated staff are focused on literacy. Similarly, Elk Grove has two full-time staff in the central office maintaining the district's catalogue of offerings and the BTSA program and a full-time coordinator for the literacy coaches. Teachers on special assignment serve as literacy coaches, one for every two elementary schools. Middle and high schools each have at least one half-time reading specialist. Again, except for central office staff, this capacity is focused exclusively on literacy and reading. To replicate this kind of capacity for other content areas requires even more people dedicated full-time to the professional development role and the political will to allocate the financial resources required.

The time required to establish instructional changes in the classroom calls for the capacity to lead, adhere to, and implement a long-term strategy. Selma has sustained a 5-year focus on literacy and reading, including a 1-year training for the lead in-house Reading Recovery expert. The San Diego reform model derives from a 10-year literacy effort in New York City's Community District 2. The stable leadership and consistent long-term vision that are necessary are also rare in large urban districts.

Overall, then, our findings illustrate that intensive support for teachers to change their instructional practices requires time, money, people, and expertise. The investments made thus far, mostly in early literacy, point to the scale of the challenge in replicating those investments in math, science, and social studies.

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PART II SUMMARY AND POLICY RECOMMENDATIONS

In the second part of this report, we have examined the systems charged with building the strengths of the existing teacher workforce. We found that California has been aggressively developing and implementing a variety of new programs to address the professional development needs of teachers at various stages of their careers. Despite these efforts, the state has yet to create a system that supports the kind of teacher learning and professional growth that translate into a world-class school system.

California has fully funded an induction program for new teachers that is among the most innovative in the nation. However, many districts around the state lack a sufficient number of mentor teachers to meet the demand created by the flood of new teachers into the system. California has invested in the professional development of the state's teachers and has recently enacted new programs to further improve reading and mathematics instruction. However, the professional development system is cluttered with too many disconnected and time-consuming programs. In addition, California teachers find that too much of their formal professional development is of poor quality, fails to meet their needs, and has little impact on their teaching. To make matters worse, most schools and districts do not provide adequate supports and incentives that would encourage and allow teachers to enhance their own learning. Moreover, far too many of California teachers must work in school conditions that inhibit professionalism.

In response to these findings, the Task Force has made the following recommendations:

Encourage and support teachers to reach high levels of subject matter expertise and instructional skill.

- Commission, on behalf of the Legislature, an independent analysis of existing statutes, regulations, policies, procedures, and guidelines with the intent of eliminating provisions that deflect teachers' professional development time to matters other than the enhancement of subject matter expertise and instructional skills, and that don't reflect the elements of high quality professional development.
- Focus professional development on enabling students to meet the state standards by calling for all appropriate public agencies, including the legislature, State Board of Education, State Department of Education, and the California Commission on Teacher Credentialing, to take action to ensure that state-sponsored and locally sponsored professional development opportunities are consistent with the elements of high-quality professional development.

- Ensure that all novice teachers, including interns and those on emergency permits and waivers, get the support and guidance they need to enable their students to reach the state standards for student learning.
- Make available to districts incentives of up to $250 per student (75% new funding with a local match of 25% from existing sources) to restructure the teaching day and year to embed time for teachers to participate in high quality professional development that addresses student standards.
- Create incentives for teacher preparation institutions to offer experienced teachers masters degree programs consistent with standards set forward by the National Board for Professional Teaching Standards that culminate in the award of both a master of arts degree and successful completion of the National Board certification assessments.
- By 2005 the Legislature should establish an overall statewide goal in statute of at least one teacher certified by the National Board for Professional Teaching Standards for every school in the state.
- Support for National Board certification candidates should be included annually in the budget with funds authorized for 1) continuing the incentives established in AB 858, 2) subsidizing candidate application fees, and 3) developing candidate support programs. Priority in allocation of these funds should be given to candidates from and programs providing service to inadequately staffed schools.

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APPENDIX. DATA COLLECTION METHODS AND ANALYSES

This study was conducted in two phases. Phase I consisted of an inventory of secondary data pertaining to teacher development in California. Phase II consisted of two primary data collection activities: a teacher survey and a series of case studies.

Inventory

Phase I was designed to provide an "outside-in" view of the system of teacher development, focused around the key topics of teacher supply and demand, preparation, recruitment, induction, professional development, and compensation. Data collection methods included review of previous studies and reports, analyses of available statewide databases, review of legislation and program documents, and interviews with key actors throughout the state.

The end product of Phase I, the *Inventory of the Status of Teacher Development in California,* published in June 1998, provides a statistical portrait of the system of teacher development, a description of relevant teacher development policies, and a review of evaluations of programs aimed at strengthening the system of teacher development.

The supply and demand chapter of the *Inventory* was updated and reissued as a separate draft report in April 1999. Specific new analyses included in this memo were estimated impacts of two specific preparation and induction policies, the potential size of the retirement "bulge," and the growth of intern programs.

Statewide Teacher Survey

The purpose of the teacher survey was to capture teachers' perspectives on their own career development. Based on a stratified random sample of 1,000 K-12 teachers across the state, it was designed to provide a representative portrait of teachers' views about the extent, nature, and effectiveness of various professional learning opportunities.

Teacher Survey Design

The survey asked teachers to report on a variety of topics, grouped into the following sections:

- Attitudes about teaching
- Teaching assignment and preparation

- Job search and support for new teachers
- Workplace support and professional development
- Compensation
- Standards
- Teacher background.

The survey instrument included proportionately more items on topics for which we found significant gaps in existing statewide data during our Phase I work. For example, given the dearth of current information on teachers' ongoing support and professional development, we made the professional development and workplace support section significantly more comprehensive than other sections.

To improve the accuracy of survey responses, respondents were given specific instructions about the time periods that each item referred to, and certain types of teachers were skipped out of sections for which they were not appropriate respondents. Table A-1 describes the types of respondents for each section and the time periods the items inquired about.

The survey was developed through an iterative process that incorporated input from the research community, including Judith Warren Little at UC Berkeley and Joan Talbert at Stanford University, and practitioners, many of whom are among the initiative's cosponsors and Task Force members, as well as Bay Area teachers. The draft survey was piloted with 10 teachers to assess completion time and the comprehensibility of each survey item.

Sampling Procedures

The optimum sampling strategy would have been a simple random sample of teachers drawn from the full pool of the approximately 284,000 teachers in the state in 1998-99. Unfortunately, an accurate and up-to-date list of practicing teachers was not available. Given these constraints, we opted for a two-stage sampling approach—first selecting a stratified random sample of schools within California and then selecting teachers within those schools to create a sample representative of the statewide population of teachers within each cell created by the strata discussed below.

School Sample. The sampling frame for schools was developed by using the 1996-97 and 1997-98 California Basic Educational Data System (CBEDS) database. Eligible schools were those schools identified in the CBEDS database as elementary, middle, junior, or high (we excluded the less traditional schools, such as alternative high schools or community day schools, to allow for a more focused analysis of the experiences of teachers within the most typical school settings in the state). The 7,074 schools were stratified along two dimensions: the size of their

Table A-1
Types of Respondents and Relevant Time Periods, by Survey Topic

Survey Topic	Types of Respondents	Time Period Referred to in Survey Item*
Attitudes about teaching	All	Current school year
Teaching assignment	All	Current school year
Preparation	All†	Period of preparation program
Job search	Teachers with fewer than 5 years of classroom teaching experience as of August 1, 1998	Period of job search
Support for new teachers	Teachers with fewer than 5 years of classroom teaching experience as of August 1, 1998	First 2 years of teaching
Workplace support	All	Current school year
Professional development	Teachers in at least their second year of teaching in 1998-99‡	1997-98 school year‡
Compensation	All	Current school year and 1997-98
Standards	All	Current school year
Teacher background	All	Current school year

* The SRI statewide teacher survey was administered from December 1998 to March 1999. Survey administration is discussed later.

† Teachers who held emergency permits or waivers were subsequently removed from the analysis of items dealing with teacher preparation programs.

‡ Only those teachers who had been formally assigned to provide guidance and assistance to new teachers answered questions about being a mentor for the time period during which they were formally assigned.

districts (four ranges of student enrollment) and grade levels served (elementary, middle, high). Junior high schools were placed in the middle school category. To provide a robust number of schools within each cell of this sampling frame, we selected a total of 120 schools for the survey. We slightly oversampled middle and high schools and schools from smaller districts to ensure that the a final numbers of teachers in those cells would be large enough to perform statistical analyses.

In this first stage of the two-tiered sampling plan, we sent principals of the 120 selected schools a letter explaining the overall initiative, its sponsors, and the purpose of the survey. The letter requested a list of the school's full-time classroom teachers (with an option to send only initials or codes rather than names). Following this mailing, we conducted follow-up calls to all principals to obtain the staff list. When available, faculty rosters of sampled schools were also

collected from the Internet. As an incentive, principals who sent faculty rosters were offered a chance to win a computer for their school. This process resulted in a sample of 109 schools (response rate of 91%). Table A-2 shows the final number of schools included in the stratified sample, the school-level response rate by cell, the percentage of the total school sample represented by each cell, and the corresponding number of schools from the statewide population that falls within each cell.

Table A-2
Distribution of School Sample by Stratum

	Size of District (number of enrolled students)				
Level	**< 1,000**	**1,000-5,000**	**5,001-20,000**	**>20,000**	***ROW TOTAL***
Elementary					
Schools sampled	9	13	19	21	*62*
Response rate	75%	93%	86%	95%	*89%*
Percent of sample	8%	12%	17%	19%	*57%*
Population	479	844	1,834	1,955	*5,112*
Percent of pop.	7%	12%	26%	28%	*72%*
Middle/Jr. High					
Schools sampled	5	5	6	6	*22*
Response rate	100%	100%	86%	75%	*88%*
Percent of sample	5%	5%	6%	6%	*20%*
Population	49	234	414	411	*1,108*
Percent of pop.	0.7%	3%	6%	6%	*16%*
High					
Schools sampled	5	5	7	8	*25*
Response rate	100%	100%	100%	100%	*100%*
Percent of sample	5%	5%	6%	7%	*23%*
Population	79	171	292	312	*854*
Percent of pop.	1%	2%	4%	4%	*12%*
COLUMN TOTAL					
Schools sampled	*19*	*23*	*32*	*35*	*109*
Response rate	*86%*	*96%*	*89%*	*92%*	*91%*
Percent of sample	*17%*	*21%*	*30%*	*32%*	*100%*
Population	*607*	*1,249*	*2,540*	*2,678*	*7,074*
Percent of pop.	*9%*	*18%*	*36%*	*38%*	*100%*

Teacher Sample. After obtaining rosters of full-time teachers from the sampled schools, we randomly sampled teachers within each of the 12 cells of the two stratification variables. Because schools in small districts typically have fewer teachers, we slightly oversampled teachers from small districts to ensure large enough numbers in these cells. Table A-3 shows the number of teachers sampled from each cell, the percentage of the total teacher sample represented by that cell, and the total number of teachers statewide that fall within that cell. The total number of teachers displayed, 228,621, is the total number of teachers working in 1997-98 in the 7,074 schools used to select the school sample.

Table A-3
Distribution of Teacher Sample by Stratum

	Size of District (number of enrolled students)				
Level	**< 1,000**	**1,000-5,000**	**5,001-20,000**	**>20,000**	***ROW TOTAL***
Elementary					
Teachers sampled	55	79	144	161	*439*
Percent of sample	5%	8%	14%	16%	*44%*
Population	5,780	18,586	48,403	57,902	*130,671*
Percent of pop.	3%	8%	21%	25%	*57%*
Middle/Jr.High					
Teachers sampled	16	54	100	101	*271*
Percent of sample	2%	5%	10%	10%	*27%*
Population	594	6,257	15,758	18,653	*41,262*
Percent of pop.	<1%	3%	7%	8%	*18%*
High					
Teachers sampled	25	50	105	118	*298*
Percent of sample	2%	5%	10%	12%	*20%*
Population	1,107	6,954	21,976	26,651	*56,688*
Percent of pop.	<1%	3%	10%	12%	*25%*
COLUMN TOTAL					
Teachers sampled	*96*	*183*	*349*	*380*	*1,008**
Percent of sample	*10%*	*18%*	*35%*	*38%*	*100%*
Population	*7,481*	*31,797*	*86,137*	*103,206*	*228,621*
Percent of pop.	*3%*	*14%*	*38%*	*45%*	*100%*

* The final number of teachers who received the survey is 950, because we subsequently found out that certain individuals sampled were not full-time teachers, no longer teaching, or no longer employed at the school.

Survey Administration. The teacher mail survey was administered from December 1998 through February 1999. In the first mailing, we sent each teacher a packet containing an explanatory letter signed by the Task Force cosponsors, a survey, a postage-paid reply envelope, and $5 as a token of appreciation. To encourage teachers to respond promptly, we offered teachers who returned their completed surveys a chance to win one of 10 computers. SRI logged returned surveys by unique identification numbers in a response tracking system. Ten days after the initial mailing, we sent reminder postcards to all nonrespondents. After another 2 weeks, we sent nonrespondents a second survey.

To maximize the response rate, a market research firm specializing in phone surveys conducted a telephone survey of nonrespondents after the second survey mailing. Trained telephone interviewers administered the phone survey during a 4-week period in March 1999. Teachers were telephoned regularly until they granted a phone interview, refused to participate, or were determined ineligible. We directed the interviewers to expend particular effort on raising response rates in cells that were relatively low. The phone survey was abbreviated to include the most critical items on teacher development and teacher demographic data to enable analysis of nonresponse bias. Because teachers who responded by telephone did not respond initially by mail, the data retrieved through the phone survey was also used to determine whether there was a nonresponse bias. We compared the survey responses of teachers who responded to initial requests by mail and those who responded only when phoned. In doing so, we found no evidence of differential response patterns between the two groups and therefore made no adjustments to reflect a nonresponse bias.

Seventy-two percent of all teachers in the original sample responded by returning their mail survey or participating in a telephone interview (Table A-4). However, many teachers who were sent surveys were eventually determined to be ineligible, because it was learned that they were no longer teaching, were not teaching at the same school, or were not teaching full-time. Taking into account that many teachers were unavailable or ineligible to respond, the final response rate for the teacher survey was 77%.

SRI statistical programmers reviewed returned questionnaires to resolve any invalid codes and internal inconsistencies before data entry. A reliable data entry firm entered and 100% key verified the questionnaire data. Data files were cleaned and phone and mail survey data were merged before conducting any analyses.

Table A-4
Teacher Survey Response Rates by Stratum

	Size of District (number of enrolled students)				
Level	**< 1,000**	**1,000-5,000**	**5,001-20,000**	**>20,000**	***ROW TOTAL***
Elementary					
Respondents	42	57	105	105	*309*
Response rate	79%	75%	76%	72%	*75%*
Middle/Jr. High					
Respondents	12	39	82	71	*204*
Response rate	80%	76%	86%	76%	*80%*
High					
Respondents	17	34	79	86	*216*
Response rate	77%	71%	78%	76%	*76%*
COLUMN TOTAL					
Respondents	*71*	*130*	*266*	*262*	*729*
Response rate	*79%*	*74%*	*80%*	*75%*	*77%*

Survey Analysis

All survey analysis was conducted with the statistical software package SUDAAN. We chose to use that software for its capability in weighting data from the complex multistage sample of teachers. Using weighted data for all analyses, we conducted the following iterative analytical steps:

- We calculated means and frequencies for each item of the survey.
- We developed cross-tabulations for independent variables of interest. Table A-5 presents three key independent variables that were used in cross-tabulations of most survey items.
- Chi-square tests were used to determine statistical differences between the distribution of groups on categorical variables.
- For analyses of Likert scales, F-tests were used to determine the overall significance of an item for independent variables consisting of more than two groups (e.g., percent minority students in respondent's schools has four groups). Contrast tests on the means then determined the specific groups that explained the significance of the F-tests. For independent variables of two groups, we used independent t-tests on the means of the Likert scales to determine significance (e.g., elementary versus secondary school levels).

Table A-5
Selected Key Independent Variables

Independent Variable	Categories
Percent minority students in respondent's school	0% - 30% minority students > 30% - 60% > 60% - 90% > 90% -100%
Percent students in respondent's school receiving free lunch	0% - 25% students receiving free lunch > 25% - 50% > 50% - 75% > 75% -100%
Percent emergency teachers in respondent's school	0% - 10% emergency teachers > 10% - 20% > 20%

One key analysis is the impact of different stages of the teacher development continuum on helping teachers master selected skills outlined in the *California Standards for the Teaching Profession* (CSTP). Items 10, 20, and 29 in the survey are based on the CSTP and ask teachers the degree to which their preparation programs, induction activities, and professional development activities helped them gain the specific CSTP skills. To analyze these items, we collapsed these 13 stem items into 6 groups, organized by topic, or skill, according to the CSTP. Table A-6 shows which stems were used to create average means in each skill area.

Case Studies of Local Teacher Development Systems

To complement the breadth of statewide data gathered through both the *Inventory* and the teacher survey, we conducted in-depth case studies of eight local systems of teacher development. These case studies examined teachers' career decisions and learning opportunities, the effectiveness of these opportunities, and the extent to which the current system of teacher development is integrated and coherent. The cases allowed for exploration and, in some instances, explanation of patterns that appeared in the statewide data.

Table A-6
Detail on Analysis of Survey Items Based on the CSTP

CSTP Skill Area	Stem(s) from Items 10, 20, and 29
Engaging all students	b. Help students to connect classroom learning to their life experiences and cultural understandings.
	c. Use strategies that support subject-matter learning and language development for second language learners.
	d. Engage students in problem-solving activities that can be solved in multiple ways.
Creating effective environments	e. Help students accept and respect different experiences, ideas, backgrounds, feelings, and points of view.
	f. Help students to internalize classroom rules, routines, and procedures and to become self-directed learners.
Understanding subject matter	a. Understand subject matter in sufficient depth and communicate that understanding to my students.
	g. Develop and use a repertoire of instructional strategies well suited to teaching a particular subject matter.
	h. Select and use instructional materials and resources that promote students' understanding of subject matter.
	i. Use educational technology (e.g., computers, multimedia) to convey key concepts in the subject-matter area.
Planning Instruction	j. Plan lesson content and instructional strategies that are appropriate to student learning needs.
Assessment	k. Ensure that student learning goals reflect key subject-matter concepts, skills, and applications.
	l. Use assessment tools that are matched to and support my goals for student learning.
Engaging with students' families*	m. Engage in positive dialogue and interactions with families, and respond to their concerns about student progress.

* Based on item from the "professional development" skill area in CSTP.

Sample of Local Systems. Each case captured a local system of teacher development. Here we use the term "system" loosely to capture the constellation of teacher development opportunities available to and used by teachers, as well as the set of local policies and practices that support teachers' work and influence their decisions. We conceptualized each local system by considering first the teacher who is working in a particular school context—the norms, policies, and practices of which go far to define learning opportunities and to influence decisions. The school context is nested within the district, the resources, policies, and practices of which influence what happens in the school. The district, in turn, is situated within the broader system

of teacher development opportunities and resources provided by the state and federal governments.

We sampled eight local systems of teacher development, selected to reflect a range of access to teacher development resources ("high" and "typical"), different levels of urbanicity, and the many "Californias." By "high" access to teacher development resources, we mean districts that have a tradition of strong relationships with local colleges and universities or where there are significant external resources to support teacher development. "Typical" access refers to cases in which the district and county provide most of the teacher development support without significant help from external resources. Cases were selected on the basis of nominations from the field and background screening by telephone. Table A-7 illustrates the sampling frame for the case studies.

Table A-7
Case Study Sampling Frame

Access to Teacher Development Resources	Urban	Suburban	Rural
High access	Los Angeles San Diego	Elk Grove Santa Monica	Eureka
Typical access	San Francisco	Selma	El Centro

School and Teacher Samples. Within each local system, we sampled four schools: two elementary, one middle, and one high school. We chose schools that matched the demographics of the district overall and, when possible, had higher test scores than other district schools. Typically, all four schools were within a single district and the same feeder pattern. However, in El Centro, we included two smaller districts in the sample, an elementary and a high school district in the same feeder pattern.

Within each school, we sampled four teachers: two "new" teachers (defined as 5 or fewer years of teaching experience) and two "experienced" teachers (more than 5 years of teaching experience). Where possible, at the elementary level, we selected two primary grade teachers and two upper elementary grade teachers; at the middle school level, two English/social studies teachers and two math/science teachers; and at the high school level, two English and two math teachers. Within this mix of teachers, we also included BTSA support providers, BTSA participants, mentor teachers, emergency-permit teachers, newly credentialed teachers, district interns, and teachers highly involved in professional development and those relatively uninvolved.

This strategy provided a sample size of 9 districts, 32 schools, and 128 teachers, as shown in Table A-8.

Table A-8
Case Study Sample

Level	Districts	Schools	Teachers
Elementary	2	16	64
Middle	0	8	32
High	1	8	32
Unified	6	N/A	N/A
Total	**9**	**32**	**128**

Site Visits. Site visits to the eight systems were conducted during the 1998-99 school year, and ranged from 5 to 12 person-days on-site in teams of 2 to 3 researchers, depending on the complexity of the local system. In each system, we conducted in-depth interviews of teachers, administrators, and district-level personnel. Table A-9 lists the types of interviewees. We also conducted focus groups with teachers. Interviews and focus groups with newer teachers emphasized teachers' preparation, recruitment, and induction experiences. Interviews and focus groups with more experienced teachers focused on professional development, compensation, and evaluation issues. Interviews and focus groups were semistructured, framed by interview topic guides that were flexible enough to capture the respondents' unique stories but had sufficient prompts to provide an acceptable level of data uniformity to permit cross-case comparisons.

Table A-9
Case Study Interviewees

Level	Types of Interviewees
School	• Teachers • Principals • Specialists with teacher support roles (e.g., reading specialist)
District	• Superintendent • Curriculum specialists, coaches, staff developers, professional development coordinators, BTSA coordinator • Recruiting and hiring managers • District intern program administrators
External to district	• Teacher educators in partner programs • Teacher educators in local IHEs

Case Study Analysis. Detailed case study debriefing forms guided the preparation of internal case study reports. Each site visiting team was responsible for analyzing the data collected for its own site and synthesizing the data in the case study reports. Two analytic meetings with all site visitors were held to discuss findings within and across cases, and to develop cross-site themes for each major category of teacher development as reviewed in the *Inventory* (i.e., supply and demand, recruitment, preparation, etc.). We analyzed case study data according to various strata by which we sampled (i.e., access to teacher development resources and urbanicity), as well as other variables that emerged as salient, particularly the percent minority students in the school, student poverty, and school level.

Integrated Analysis. Teacher survey data analyses were compared with themes emerging from case study data for each of the major categories of the teacher development continuum. Case study data provided rich and textured examples of patterns found in the survey data. Disconfirming survey and case study data were examined as to the causes of the discrepancy.

Projecting Supply and Demand

Using the best available historical data beginning with 1991-92, we projected the demand for total teachers and the number of credentialed teachers employed in the teaching workforce from 1999-2000 through 2007-08. The primary goals of the projections are to provide estimates of the impact of two key state policies—the expansion of BTSA and the expansion of CSU credentials produced—and to inform the question of whether and when the number of credentialed teachers taking jobs in California will meet the demand for them. Although the state has passed numerous other policies, as discussed in Chapter 2, the lack of solid empirical data regarding their implementation precludes our ability to forecast, however crudely, their potential effects. We recognize that, even for the projections that we did undertake, results vary widely, depending on certain assumptions. Key assumptions have substantial impacts on the projections, and thus we have used sensitivity analyses under multiple scenarios to provide the range of potential impacts.

The method of calculating the projected supply and demand followed these general steps:

1. Total demand calculations
2. Status quo calculations (before BTSA and CSU expansion impacts)
3. Incremental impact of BTSA expansion
4. Incremental impact of CSU expansion

5. Calculation of remaining gap, i.e., emergency permit and waiver teachers.

Total Demand Calculations

Total demand for credentialed teachers is a function of projected student enrollment, pupil-to-teacher ratio, and attrition and retirement rates. These assumptions are detailed in Table A-10 below.

Table A-10
Demand Factors and Assumptions

Demand Factor	Assumptions
Projected student enrollment	Actual 1998-99 student enrollment from CDE plus annual growth rate of 1% from Department of Finance Projections, 1998 Series[1]
Pupil-to-teacher ratio	Actual 1998-99 statewide pupil-to-teacher ratio of 20.6 calculated by dividing CDE-reported total enrollment by CDE-reported total teachers for 1998-99. Pupil-to-teacher ratio held constant through 2007-08.
Attrition rate	Estimated 6% of total teacher workforce annually[2] held constant through 2007-08.
Retirement rate	Estimated retirement rates using STRS membership data from the fiscal 1998 annual report.[3] A retirement rate *index* was created based on total STRS membership data and applied to estimated historical average K-12 teacher retirement rate of 2%[4] (see discussion of retirement bulge below).

Retirement Bulge. Rather than keeping a flat assumed retirement rate, we factored a retirement bulge into the demand projections to account for the impending retirement of baby boomers. Using data from the STRS fiscal year 1998 annual report,[5] the total number of active members was forecast by applying 10-year (1989-98) historical averages for the annual percentage of members turning inactive and the annual percentage of members joining STRS. The annual number of retiring members from 1999-2000 to 2007-08 was projected by using actual age-based data. Members aged 51 to 59 in 1998-99 were assumed to retire at the STRS members' average retirement rate of 60 from 1999-2000 through 2007-08. The number of annual retired members was calculated as a percentage of total estimated members for that year. The corresponding annual retirement rates were indexed to the 10-year (1989-98) average STRS members' retirement rate. The resulting index begins at 125 in 1999-2000 and increases to 263 in 2007-08, which, when applied to the estimated historical average of 2% for K-12 teachers, results in 2.5% retirement rate in 1999-2000, increasing to 5.3% in 2007-08.

Supply Calculations

The supply of credentialed teachers taking jobs in California includes veteran credentialed teachers deciding to continue teaching, newly credentialed teachers, reentrants, and out-of-state teachers. As we discuss in Chapter 2, "supply" refers to those who hold preliminary or professional clear credentials as specified by California's Commission on Teacher Credentialing (CTC) requirements *and* who are willing to take jobs for the salary, assignment, location, and working conditions offered. Our supply count does not include those who are teaching with emergency permits, waivers, or internship credentials from the CTC.

The larger supply *pool* of teachers qualified to teach but electing not to do so cannot be estimated with the data available. Table A-11 details the assumptions underlying each component of supply, *before* factoring in BTSA and CSU expansion policies.

Table A-11
Supply Components and Assumptions

Supply Component	Assumptions
Veteran credentialed teachers	Estimated credentialed teachers from previous year less the attrition and retirement rates.
New credentials issued	Latest figures from CTC on First Time and New Type Multiple and Single Subject teaching credentials plus First Time Special Education and First Time and New Type Education Specialist credentials from 1997-98, plus annual growth in credentials recommended by private institutions based on 5-year (1992-93 to 1996-97) average growth rate. (New Type includes those who previously held emergency permits.)[6]
Newly credentialed teachers taking jobs (participation rate)	Range of 50% to 70% of new credentials issued each year, based on California-specific and national sources.[7]
Reentrants	Five years (1992-93 to 1996-97) of historical numbers of reentrants estimated by subtracting the number of new teachers from the number of new hires.[8] Five-year (1992-93 to 1996-97) average of the estimated number of reentrants as a percent of new hires (42%), held constant from 1999-2000 to 2007-08.
Out-of-state new hires	Five-year (1993-94 to 1997-98) average number of out-of-state new credentials of 2,888, held constant from 1999-2000 to 2007-08.

BTSA Expansion Calculations. School year 1998-99 was the first year of increased BTSA funding intended to reach newly credentialed teachers in their first or second year of

teaching. As we point out in Chapter 5, districts began BTSA expansion at different stages, depending on the induction support structures that they previous had in place. Thus, for these projections, we assume that districts phase in BTSA over 2 years so that 1999-2000 is the first year that all newly credentialed teachers receive BTSA.

BTSA is intended to improve retention rates of new teachers. Specifically, newly credentialed teachers who take teaching jobs would receive BTSA support in their first 2 years of teaching; consequently, the attrition rate among them would decrease. Under an optimistic (high) scenario, BTSA would improve retention to 80% in the first 5 years, slightly lower than the retention rate of 90% found in the pilot California New Teacher Project. The low scenario uses a retention rate of 60% over the first 5 years, a slight improvement over historical attrition of approximately 50% found in previous studies.[9] Both high and low retention rates are applied to the two participation rates of newly credentialed teachers, 50% and 70% (discussed in Table A-11). Table A-12 details the four scenarios of BTSA expansion.

Table A-12
Scenarios of Incremental Impact of BTSA Expansion

Five-Year Attrition Rate	Participation Rate of Newly Credentialed Teachers	
	50%	70%
60%	Scenario 1	Scenario 3
80%	Scenario 2	Scenario 4

For each scenario, we estimate the *incremental* BTSA impact by subtracting the number of newly credentialed teachers who otherwise would have stayed in teaching (50% over the first 5 years) from the numbers of teachers retained at the improved BTSA retention rates. The projections resulting from the low and high extremes (Scenarios 1 and 4), which bound the range of projected *incremental* BTSA impacts, are included in Chapter 2.

CSU Expansion Calculations. Legislation funds CSU expansion up to a total credential production of 15,000 per year (up from approximately 12,000 in 1996-97 and 13,800 in 1997-98). Whereas total credential production includes renewals, first-time and new type credentials recommended by CSU totaled 9,600 in 1997-98. We assume that the number of first-time and new type credentials recommended by CSU will increase to meet the total credential production target of 15,000 (as opposed to an increase in renewals).

The increased slots at CSU may be filled by entirely new teacher candidates, or they may be filled by those who otherwise would have attended an independent teacher preparation

program. Thus, the net increase in the number of newly credentialed teachers in the state may not equal the increase in the number of CSU recommendations. We calculated this "cannibalization" effect at 50% of new CSU positions, 25%, and 0% (i.e., CSU expansion does not result in any cannibalization from the independents). We then assume that the number of newly credentialed teachers from CSU expansion take jobs at the two participation rates (50% and 70%) and receive BTSA support, thereby improving retention rates to 60% or 80% over the first 5 years. Table A-13 details the specific scenarios.

Table A-13
Scenarios of Incremental Impact of CSU Expansion

Cannibalization Effect	Five-Year Attrition Rate	Participation Rate of Newly Credentialed Teachers	
		50%	70%
50% of expanded CSU positions	60%	Scenario 1	Scenario 7
	80%	Scenario 2	Scenario 8
25% of expanded CSU positions	60%	Scenario 3	Scenario 9
	80%	Scenario 4	Scenario 10
0% of expanded CSU positions	60%	Scenario 5	Scenario 11
	80%	Scenario 6	Scenario 12

Scenarios 3 and 10 are included in Chapter 2 to provide low and high estimates of the incremental impact of CSU expansion. We did not include scenarios assuming 0% cannibalization because, given the higher cost of tuition at the independents, we believe it is reasonable to expect that some individuals who want to become teachers regardless of CSU expansion would nonetheless take advantage of the increased number of CSU slots.

Calculations of Gap between Demand and Supply of Credentialed Teachers Taking Jobs

The supply of credentialed teachers taking jobs in a given year, before accounting for BTSA and CSU expansion impacts, is equal to the sum of:

- Veteran credentialed teachers continuing to teach
- The number of newly credentialed teachers taking jobs *before* CSU expansion
- The number of reentrants
- The number of out-of state teachers taking jobs.

High projected impacts of BTSA and CSU expansion are combined, as are low projected impacts to provide the high and low range displayed in Exhibit 2-7 in Chapter 2.

The difference between the total number of teachers required in the state and the projected high and low supply of credentialed teachers taking jobs, after accounting for BTSA and CSU expansion, represents the number of teaching positions unfilled by credentialed teachers. Underqualified teachers would have to take those classrooms to maintain the current pupil-to-teacher ratio.

Endnotes

[1] CDE Educational Demographics Unit. (1999). *Statewide Classroom Teacher Credential and Experience Report for the year 1998-99.* Sacramento, CA: Author.

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[3] California State Teachers' Retirement System (STRS). (1998). *Population information for fiscal year 1997-1998.* Sacramento, CA: Author.

[4] Cohen & Das (1996) & Fetler (1997, January).

[5] STRS (1998).

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[8] Fetler (1997, January).

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